

Journal

AMERICAN WATER WORKS ASSOCIATION

September 1953

Vol. 45, No. 9

**TWO PARTS
PART 2**

AWWA DIRECTORY

1953 • REFERENCE EDITION

**Membership Totals
Constitution and By-Laws
Honorary Awards
New Members
Consultants Directory
Buyers Guide
Chlorine Producers
The Water Supply Library**

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AMERICAN WATER WORKS ASSOCIATION

1953 Directory

REFERENCE EDITION

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Advertising space in the Directory is made available only to individuals and firms holding membership in AWWA

AMERICAN WATER WORKS ASSOCIATION, INC.

521 Fifth Avenue

New York 17, N.Y.

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This 1953 edition of the AWWA Directory contains a supplementary list of members who have joined the Association since compilation of the list of members published in 1952. The next full list of members will appear in the 1954 Directory. In accordance with the policy inaugurated in 1952, the even-year editions of the Directory will contain the membership lists; the odd-year editions will contain other reference material of interest to the membership.

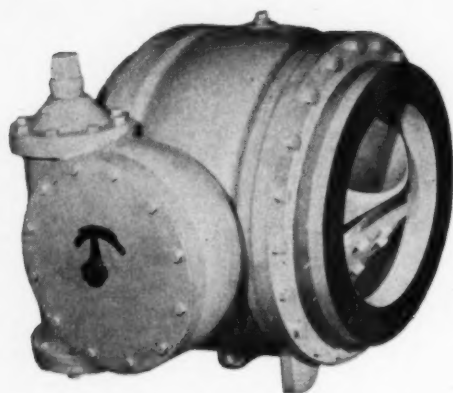
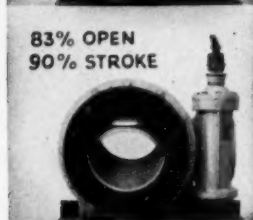
SUMMARY OF MEMBERSHIP

July 1, 1953

Honorary Members	39
Life Members	248
Active Members	7,642
Corporate Members	871
Associate Members	352
Junior Members	39
Affiliates	47
Municipal Service Subscribers	180
Total	9,418

Membership by Sections

Alabama-Mississippi	169	New England	217
Arizona	75	(Conn., Me., Mass., N.H., R.I., Vt.)	
California	1,046	New Jersey	410
Canada	589	New York	748
Chesapeake	238	North Carolina	188
(Del., D.C., Md.)		Ohio	397
Cuba	71	Pacific Northwest	345
Florida	298	(Idaho, Ore., Wash.)	
Illinois	493	Pennsylvania	458
Indiana	338	Rocky Mountain	153
Iowa	121	(Colo., N.M., Utah, Wyo.)	
Kansas	208	Southeastern	212
Kentucky-Tennessee	180	(Ga., S.C.)	
Michigan	351	Southwest	836
Minnesota	230	(Ark., La., Okla., Tex.)	
(Minn., N.D., S.D.)		Virginia	181
Missouri	186	West Virginia	103
Montana	58	Wisconsin	181
Nebraska	91	Foreign	247



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INTRODUCTION

THE American Water Works Association was organized in 1881 to "advance the knowledge of the design, construction, operation and management of water works." Its activities in part are developed through regional or state Sections, in part through general Divisions, in part through technical committees and in part through its monthly JOURNAL.

There are at present 30 regional or state Sections. The largest ones are in California, the Southwest, and New York. Each Section has at least one meeting each year with attendance totals ranging from 100 to more than 1,000 interested persons. Papers are presented; round table discussions are held; tests are made; exhibits frequently are available—all designed to improve water works design and management in the Section area.

There are four professional Divisions of the Association: Management; Water Resources; Water Purification; and Transmission and Distribution. The programs at the Annual Conferences of the Association are built around the activities of these Divisions.

The technical work of the Association is organized under the Committee on Water Works Practice and the Committee on Water Works Administration. These are groups of men selected to provide a cross section of the Association's field of interest, in the persons of leaders in the field. No technical pronouncements in the name of the Association are made until they are accepted by these committees and approved by the Board of Directors.

The Board of Directors has also established certain special committees to deal in fields of Association policy. At present such committees include "General Policy," "National Water Policy," and a committee on "Federal Activities" which devotes itself to problems derived from federal orders and rulings.

The JOURNAL AWWA is a monthly publication which totals approximately 2,500 pages per year. In it are found the papers and reports on water works subjects deemed to have permanent or major value to the field. About 150 pages annually are given over to abstracts of articles the world over which relate to all aspects of water works affairs. No comparable cross-section of data exists elsewhere. An Index of Association publications for the years 1881 to 1939 and an Index to the JOURNAL for the years 1940-1944 are available.

The Association maintains headquarters at 521 Fifth Avenue, New York 17, N.Y., with a full-time staff of thirteen persons available for conference or correspondence on matters of general water works interest.

LOCAL SECTIONS

There have been established 30 Local Sections, under the provisions of Article VII of the Association's By-Laws. Each of these Sections consists of the Association members who reside in the territory embraced by that Section. A tabulation of the Sections, the states they include, and the membership total for each, is given on page iii.

Each Local Section has its own officers, as listed each month in the JOURNAL. These officers are all selected by the Section itself under the provisions of the By-Laws of that Section. One of these officers is a member selected to represent his Section on the Board of Directors of the American Water Works Association, in accordance with Articles III and IV of the Association's Constitution.

The Local Sections each hold one or more meetings during the year, their practice in this respect, as well as the conduct of all of their business, being adapted to meet best the needs of their respective territories. Papers presented at the Local Section meetings are drawn upon for publication in the JOURNAL of the Association, as are also the papers presented at the Annual Convention of the Association.

Many of the Association's Sections hold each year one or more water works schools (conferences or in-service training institutes) and several cooperate in the procedure within their states which licenses the operators of water treatment plants. This is done in order to insure to the various communities as permanent and well-trained personnel as can be provided.

Each member and affiliate of AWWA is automatically a member of the Section in which he resides, and there are no membership dues other than the regular Association dues, each Section receiving funds from the Association for its routine activities.

NATIONAL DIVISIONS

In accordance with the provisions of Article VII of the Association's By-Laws, the Board of Directors has established four national Divisions consisting of groups of the members who are particularly interested in certain branches of the water supply industry.

Water Works Management Division: By the organization in 1948 of the Water Works Management Division in 1948, the previous Plant Management and Operation Division, established in 1924, and the Finance and Accounting Division, established in 1929, were terminated. The new Division combines the functions of both, taking as its specific fields of interest the financing, management, commercial practices and accounting procedures of water works. Ad-

ditions to knowledge and the improvement of practices within these fields are the objectives of the Division.

Water Resources Division. The conservation and orderly development of both surface and ground waters, and the control of water pollution as it affects the economics of water supply, are the fields of interest of the Water Resources Division. The Division was organized in 1948.

Water Purification Division: This Division was organized originally as the Chemical and Bacteriological Section in 1913. The present name was adopted in 1925. The objects of this Division in particular are: the advancement of the science and art of water purification; the stimulation of research in the physical, chemical and bacteriological fields, especially on the causes and effects of pollution and methods of purification; and the promotion of progress in the design, construction and operation of water purification works.

Transmission and Distribution Division. The scope of the Transmission and Distribution Division, which was organized in 1952, includes design, construction, operation, and maintenance activities in the fields of power, pumping, transmission, distribution, customer services, and metering of public water supply.

Any Active or Junior Member or Affiliate of the American Water Works Association may become a member of any one or more of these Divisions upon request, and with no further dues. The principal activities of the Divisions take place during the Annual Convention of the Association, at which time a number of the technical sessions are held under the auspices of the Divisions. Each of such meetings is presided over by the officers of the Division concerned and the subjects of discussion are those in which the Division is interested. The Divisions may also appoint committees for study, research and report upon subjects of interest to them. These committees act under the general supervision of the Association's standing Committees on Water Works Practice or Water Works Administration, if they have as their object the development of standards, specifications or manuals. If the committees are set up for the compilation of related facts and routine practices within the field of interest of the Division, the Committees on Water Works Practice and Water Works Administration exercise no supervision.



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CONSTITUTION & BY-LAWS

of the

**AMERICAN WATER WORKS
ASSOCIATION**

with

STATEMENTS OF POLICY

AMERICAN WATER WORKS ASSOCIATION

Incorporated

521 Fifth Avenue

New York 17, N.Y.

The text of the Constitution and By-Laws, adopted June 25, 1929, includes all amendments made to the date of issue of this Directory. The following amendments have been made in the past five years:

<i>Constitution</i>	<i>Art. II</i>	<i>January 1, 1950</i>
<i>By-Laws</i>	<i>Art I, Sec. 3 *</i>	<i>September 4, 1951</i>
	<i>Art. II, Sec. 2.1, 2.2, 3</i>	<i>February 21, 1949</i>
	<i>Art. III *</i>	<i>September 4, 1951</i>
	<i>Art. V, Sec. 5.3</i>	<i>August 28, 1950</i>
	<i>Art. V, Sec. 6.2, 6.3</i>	<i>October 23, 1947</i>
	<i>Art. VI, Sec. 1.1</i>	<i>October 23, 1947</i>
	<i>Art. VII, Sec. 1</i>	<i>March 10, 1950</i>
	<i>Art. VII, Sec. 4</i>	<i>January 18, 1948</i>
	<i>Art. VII, Sec. 4.2</i>	<i>August 28, 1950</i>
	<i>Art. IX</i>	<i>October 23, 1947</i>

** Not included in text when last published in the 1950 Directory.*

CONSTITUTION AND BY-LAWS
of the
AMERICAN WATER WORKS ASSOCIATION
(Incorporated)

CONSTITUTION

ARTICLE I

Name

The name of this Association shall be—The American Water Works Association.

(Constitution)

ARTICLE II

Object

The objects of this Association shall be:

a. to advance the knowledge of the design, construction, operation and management of water works;

b. to consider and deal with the problems involved in the production and distribution of safe and adequate water supplies;

c. to promote satisfactory relationships with the consuming public;

d. to give proper consideration to and express opinions upon practices which will enable the industry to

render the best possible service to the public;

e. to do whatever things are necessary and proper for the accomplishment of the objectives herein set forth, all of which shall be consistent with the public interest and with the interests of the water works industry.

The membership of the Association consists of persons interested in such matters and in accord with the above objectives. Qualifications for and classifications of membership shall be as prescribed in the By-Laws.

(Constitution)

ARTICLE III

Board of Directors

SECTION 1. The Governing Body of the Association shall be a Board of Directors, hereinafter called the Board.

SECTION 2. The Board shall consist of:

a. The President of the Association.

b. The Vice-President of the Association.

c. The Treasurer of the Association.

d. One Director to be elected by each Section of the Association.

e. Three Directors to be elected by the Water and Sewage Works Manufacturers Association.

f. The latest living Past President of the Association, who is, *ex officio*, Chairman of the General Policy Committee.

g. The Chairman of the Committee on Water Works Practice.

h. The Chairman of the Committee on Water Works Administration.

i. The Chairman of the Publication Committee.

SECTION 3.

3.1. The terms of Directors and Officers shall start at the beginning of the last day of the annual convention held subsequent to the date of their election. If, for any reason, a Director is not elected until after the date of the holding of the annual convention at which he should have commenced his term of office, his term of office shall begin at the date that the advice of his election is received by the Secretary. The terms of Directors and Officers shall terminate at the beginning of the last day of the annual convention in the year of expiration of their terms of office.

3.2. If, for any reason, the annual convention of the Association is not held between January 1 and July 1, in any year, then the terms of newly elected Directors and Officers shall commence on July 1 of such year; and the terms of office of the Directors and Officers who are to be succeeded shall terminate on that date.

SECTION 4. The President of the Association, the Vice-President of the

Association and the Directors elected by the Sections of the Association and by the Water and Sewage Works Manufacturers Association will not be eligible for reelection for consecutive terms.

SECTION 5. The Officers of the Association shall be the Officers of the Board.

SECTION 6. The functions of the Board shall include the following:

a. Establishing policies for the Association, and for the Executive Committee, and for the Officers.

b. Providing for the general administration of the affairs and property of the Association.

c. Fixing the time and place of the annual and other conventions of the Association as provided in the By-Laws.

d. Preparing and enforcing for the conduct of the business of the Association By-Laws not in conflict with this Constitution, and amending the same.

SECTION 7.

7.1. The Board may exercise the above described functions either in session at stated or duly called meetings or by letter ballot. Any matter that requires action by the Board of Directors at a time not conveniently related to a regular or called meeting may be submitted to it for approval by letter ballot.

7.2. The Board may, by resolution, designate categories of Association business which may be submitted to it by letter ballot. Matters not thus designated may be considered by the Executive Committee in the exercise of its stated duties (By-Laws, Article IV), or the Executive Committee may refer such matters to the Board for approval by letter ballot. Such action by the Executive Committee may be taken either

at a meeting of the committee or by a letter ballot of the committee, if the initiation of said letter ballot is directed by the President in a letter addressed to the Secretary.

7.3. Except as otherwise provided by resolution of the Board, matters submitted to it by letter ballot shall obtain an affirmative recorded vote of two-thirds of the Board membership to secure approval. The results of all letter ballots shall be reported to the Board at its next meeting.

SECTION 8. A quorum of the Board shall consist of a majority of its members.

SECTION 9. Regular meetings of the Board shall be held during the annual convention of the Association, on such days as may be decided by the Board. Other meetings may be held at the direction of the President, or at the request, in writing, of five members of the Board, and on such notice as shall be provided in the By-Laws.

SECTION 10. No Board Member may be represented in any action required of him as a Board Member by any other person; nor may he vote, by letter, upon any matter scheduled for consideration at a duly called meeting of the Board.

(Constitution)

ARTICLE IV

Nomination and Election of Officers and Directors

SECTION 1.

1.1. There shall be a meeting of the Board held in January of each year at which a Nominating Committee consisting of the Directors representing the various Sections of the Association shall meet under the Chairmanship of the President, and shall nominate one, and may nominate two candidates for each of the offices of President, Vice-President, and Treasurer, provided that any candidate so nominated shall be an Active Member of the Association, and shall have been a member of the Executive Committee prior to the adoption of the present Constitution and By-Laws, or a member of the Board of Directors since its adoption, and shall signify willingness to accept the nomination. This Committee shall report its list of nominees to the Board before the close of its January meeting, and the list shall then be mailed to the membership before February first of that year.

1.2. At any time prior to noon on the first day of March of each year additional nominations may be made by request to the Secretary, signed by at least twenty-five Active Members, and upon receipt of such request, the Secretary shall, after acceptance of the nomination by the candidates, add such names to the ballot prepared by him. The nominees of the Nominating Committee shall be so designated on the ballot for each office, and the names of all nominees shall be arranged in alphabetical order.

1.3. When more than one person is nominated for any office, the election shall be by letter ballot. Each Active Member shall be entitled to vote for one candidate for the office of President, one candidate for the office of Vice-President, and one candidate for the office of Treasurer. The ballot shall be prepared by the Secretary and mailed to each Active Member of the Association prior to April first in each year,

and shall state the name and residence of each candidate.

1.4. The ballot shall be sealed separately in a special ballot envelope, and the latter shall be enclosed in a larger envelope, and mailed to the Secretary. The signature of the member voting shall appear on the outer envelope.

1.5. When a letter ballot is necessary, the Secretary together with two or more Tellers appointed by the President shall meet at a time and place directed by the President, and shall open and count all ballots cast by persons entitled to vote. No ballot shall be counted if received later than noon of the seventh day previous to the beginning of the annual convention of the Association. When only one candidate is placed in nomination for each office to be filled, the report of the Nominating Committee shall be considered as an election.

1.6. The report of the Tellers for the election of the incoming President, Vice-President, and Treasurer shall be declared by the President at the annual convention on certificates of the Tellers. The candidates who shall have received the highest number of votes cast for the several offices shall be declared elected. If there be a tie vote the President shall order a ballot to be taken at the annual convention to decide which of the candidates who have received the same number of ballots shall be chosen.

SECTION 2.

2.1. The terms of the Officers so elected shall commence at the beginning of the last day of the annual convention, following the date of their election; and shall cease at the beginning of the last day of the next annual convention. But, if an annual convention is not held prior to July 1, that date will be the date of the beginning of the term of office of an officer. Said term shall be

for approximately one year, but shall continue until a successor has been chosen.

2.2. In case of a vacancy in the office of President, the Vice-President shall act in his place for the unexpired term. In case the Vice-President cannot act, the latest living Past President shall do so.

2.3. In the case of a vacancy in the office of Treasurer, the Executive Committee shall appoint an Active Member to fill the office for the unexpired term.

SECTION 3.

3.1. One Director to represent each Local Section shall be nominated and elected by the members of the Section at an annual Section meeting, and in the same manner as the Presiding Officer of that Section is elected. The manner of such election shall receive the approval of the Board. The Director so elected shall be an Active Member and shall reside in the territory of the Section at the time of his election. Should he cease to reside in the territory of the Section before his term of office is ended, it shall be within the power of the Section to replace him.

3.2. The term of each Director so elected shall be for approximately three years, beginning with the last day of the annual convention immediately following his election, or on the following July 1. When a new local Section is established, the initial term of the Director representing such Section shall be as determined by the Board.

3.3. In the case of the retiring, from any cause, of a Director representing a Section, before his term is completed, the governing body of the Section shall designate his successor, who shall serve for the unexpired portion of the term.

SECTION 4.

4.1. Three Directors shall be nominated and elected by the Water and Sewage Works Manufacturers As-

sociation. The term of each Director shall be for three years beginning with the last day of the annual convention immediately following his election, or on the following July 1.

4.2. In the case of the retiring, from any cause, of a Director representing

the Water and Sewage Works Manufacturers Association before his term is completed, the governing body of the Water and Sewage Works Manufacturers Association shall designate his successor who shall serve for the unexpired portion of the term.

(Constitution)

ARTICLE V

Amendments

SECTION 1.

1.1. Proposals to amend this Constitution shall be made by any two active members of each of a majority of the local Sections of the Association, provided that such proposals are filed in writing with the Secretary not less than thirty days prior to a stated meeting of the Board. It shall be the Secretary's duty to submit such proposals to the Board of Directors at its next stated meeting.

1.2. The Board shall consider the proposals at any stated meeting (Constitution Art. III, Sec. 9; Art. IV, Sec. 1) and the proposers shall be notified of the Board's opinion in regard thereto not later than thirty days after such meeting.

1.3. The proposers may then withdraw their proposals, accept any change suggested, or insist on the original form, sending their decision to the Secretary not later than thirty days after the date of the Secretary's notice of the Board's action.

1.4. The proposals, as accepted by the proposers, shall be mailed to the Active Members not less than twenty-one days before the annual convention.

1.5. Proposals to amend this Constitution may also be made by the Board and shall be mailed to the Active Members not less than twenty-one days before the annual convention.

1.6. All proposals shall be submitted for discussion at the annual convention. The Active Members there present may propose an amendment or amendments thereto, and all proposals together with any such amendment or amendments shall be printed on a letter ballot to be submitted to the Active membership.

1.7. The Secretary shall issue the letter ballot not later than two months after the annual convention. On the written request of three or more members the letter ballot shall be accompanied by a statement giving reasons for and against the proposal edited by a Committee appointed by the Board, consisting of an equal number of members favoring and members opposing the proposal.

1.8. The letter ballot shall be returnable to the Secretary not later than three months after the annual convention. Three Tellers appointed by the Board shall forthwith count the ballots and report the result to the Board.

1.9. An affirmative two-thirds of all valid ballots shall be necessary for the amendment or repeal of any part of the Constitution.

1.10. The amendments as passed shall take effect at the beginning of the next calendar year except that changes affecting the tenure of office of an Officer of the Association shall not take effect until the next annual convention.

BY-LAWS

ARTICLE I

Membership

SECTION 1. The membership of the Association shall consist of Honorary, Active, Corporate, Associate, Junior Members and Affiliates.

SECTION 2. An Honorary Member shall be one whose practical or scientific knowledge in matters relating to water supply, and whose accomplishments in that field of endeavor shall entitle him to special recognition by the Association. Honorary Members shall have the same privileges as Active Members but shall not be required to pay any dues for the support of the Association.

SECTION 3. A Life Member shall be any Active member in good standing who has paid *Active Membership* dues continuously for 30 years. A Life Member shall not be required to pay any dues for the support of the Association.

SECTION 4. An Active Member shall be a superintendent, a manager, an official or employee of a municipal or private water works; a civil, mechanical, hydraulic, or sanitary engineer, a chemist, a bacteriologist, or any qualified person engaged or interested in the advancement of knowledge relating to water supplies.

SECTION 5. A Corporate Member shall be a Water Board, Water Commission, Water Department, Water Company or Corporation, National, State or District Board of Health, or other body, corporation or organization engaged or interested in water supply work, and shall be entitled to one representative whose name shall appear on the roll of members and who shall have all the rights and privileges of an Active Member. This representative may be changed at the con-

venience and pleasure of the Corporate Member on written notice to the Secretary.

SECTION 6. An Associate Member shall be a person, firm or corporation engaged in manufacturing or furnishing supplies for the operation, construction or maintenance of water works.

SECTION 7. A Junior Member shall be an employee of a municipal or private water works; a civil, mechanical, hydraulic, or sanitary engineer, a chemist, a bacteriologist, a student or any otherwise qualified person engaged or interested in the advancement of knowledge relating to water supplies. At the time of his admission he shall be not less than eighteen years of age. His connection with the Association shall cease when he becomes twenty-five years of age, unless he is regularly enrolled as a student in a university or has previously transferred to the grade of Active Member. Junior Members shall receive the JOURNAL and all privileges of Active membership except holding office and voting.

SECTION 8.

8.1. An Affiliate shall be any person otherwise qualified for Active membership who, at the time of application, is not nor previously has been a member of the Association, and who, for acceptable reasons, does not wish to become an Active Member.

8.2. No corporation, firm or partnership which otherwise would be entitled to the grades of Associate or Corporate Member may hold the grade of Affiliate. No employee of an Associate Member may become an Affiliate. No person who is the Superintendent, the Manager, the Chief Engineer, the Superintendent of Filtration,

the Chief Chemist or the Superintendent of Distribution in a plant having more than 3000 active services, is eligible for the grade of Affiliate. Under unusual conditions, exception to the above may be made by action of the Executive Committee if the applicant sets forth fully the reasons for the exception when applying for the Affiliate grade.

8.3. Affiliates shall not be entitled to vote upon general Association questions, and shall not be eligible to hold office in the Association, nor in any of its Divisions. They shall be eligible to vote upon Section questions and to hold Section offices except those of Chairman, Vice-Chairman, Secretary (and/or Treasurer). They shall be entitled to all other rights and privileges of Active Members.

SECTION 9.

9.1. Municipal Water Departments, Boards or Commissions may become

Municipal Service Subscribers to the Journal. They will be entitled to receive all publications and bulletins which are sent to members of the Association. They will also be entitled to receive, upon request, interpretative information from the Secretary concerning standard or recognized procedures in the water works field. This service will not include information or replies to specific questions of a consulting engineering nature.

9.2. Municipal Service Subscribers shall be entitled to designate a member of the Water Department organization as "representative" whose name shall appear on the roll of members of the Association and who shall have all the rights and privileges of an Active Member. This representative may be changed at the convenience and pleasure of the Municipal Service Subscriber on written notice to the Secretary.

(By-Laws)

ARTICLE II

Admission and Expulsion

SECTION 1.

1.1. The Board of Directors shall, at its annual meeting, designate a Committee on Honorary Membership to consist of the incoming president and the two most recent living past-presidents. The duties of this Committee shall be to consider all suggestions made concerning the qualifications of any member of the Association for Honorary Membership and report its recommendations to the Board at any regular meeting thereof.

1.2. The Committee on Honorary Membership, on its own initiative or at the request of 25 active Members of the Association, may nominate any qualified person for Honorary Membership. Such nomination shall then be referred to the Board of Directors,

who may elect the nominee to Honorary Membership. This election shall take place at a regular meeting of the Board and shall be by ballot. Two negative ballots shall exclude.

1.3. Not more than three Honorary Members shall be elected in any one year. No election to Honorary Membership shall be made which would cause the total number of Honorary Members to exceed a ratio of one Honorary Member to every 125 Active Members.

1.4. Each Honorary Member shall receive an engrossed certificate of membership in that grade.

SECTION 2.

2.1. Applications for Active, Corporate, Associate, or Junior membership and for the Affiliate grade shall

be made on the blank forms provided by the Association. Each application shall include an adequate statement of the applicant's qualifications for membership. It shall describe precisely the nature of the activity in which the applicant is engaged. Applications for membership shall, whenever possible, be endorsed by a member of the Association. Applications which are received by the Secretary without endorsement may be referred by him to some member of the Association residing in the area where the applicant is located, with the request that the member endorse the application. In cases where the applicant resides in an area where no members of the Association are resident, the Secretary shall, to the degree indicated by his judgment, require the applicant to furnish evidence of his professional standing and employment to such extent as will indicate the adequacy of the applicant's qualifications.

Applications for Associate Membership shall provide adequate information concerning the ownership, corporate structure and financial standing of the applicant; and the experience of the customers in the water works industry with the applicant firm. When such information has been received by the Secretary, he shall refer it to the Executive Committee of the Board for consideration and approval or rejection. The Executive Committee shall establish such detailed criteria for Associate Membership as it deems necessary to the discharge of this duty. These criteria, when approved by the Board, may be, in the case of failure of a member to continue satisfactory business practices, the basis for expulsion from membership under the terms of Section 6 hereinafter.

2.2. Applications shall be forwarded by the Secretary to the Board for approval when the above conditions have been met. An affirmative vote of a majority of the Board shall elect and the applicant shall become a member when his annual dues shall have been paid.

2.3. Affiliates may transfer to the grade of Active Member by application therefor and upon approval of the Secretary.

SECTION 3. No member whose dues are in arrears for three months shall receive the publications of the Association until such arrears are paid. Members in arrears for one year shall be automatically dropped by the Secretary from the list of members.

SECTION 4. The Board may, for sufficient cause, temporarily or permanently excuse from the payment of annual dues, any member who from ill health, advanced age, or other good reason, is unable to pay such dues, and the Board may remit the whole or part of dues in arrears, or accept in lieu thereof desirable additions to the library or collections.

SECTION 5. A member who has been dropped for nonpayment of dues may be reinstated by the Board on payment of the arrears. He shall then be entitled to receive such back numbers of the publications of the Association as may have been withheld from him on account of nonpayment of dues, and are available for distribution.

SECTION 6. Any member of any grade may be expelled from membership in the Association, by a three-quarters vote of the Board, taken by letter ballot, provided such member has been given a written statement of the charges preferred, and has been accorded an opportunity of a hearing before the Board.

SECTION 7. Any member may retire from membership by giving written notice to the Secretary, provided that he is in good standing.

(By-Laws)

ARTICLE III

Fees and Dues

SECTION 1. Each Active, Corporate, Associate, and Junior Member, and Affiliate, shall pay annual dues in the amount currently in effect for each class of membership as directed by the Board of Directors.

SECTION 2. Honorary Members and Life Members shall pay no annual dues.

SECTION 3. The fiscal year of the Association shall begin on January first, and terminate on December thirty-first. Annual dues shall be payable in advance, and shall be due on January first in each year. It shall be the duty of the Secretary to notify each member on or before December thirty-first in each year of the amount due from said member for the ensuing year.

SECTION 4.

4.1. Any newly elected member shall be entitled to all of the publications of the Association that are dis-

tributed to its members during the year, or that part of the year, for which he has paid dues.

4.2. Affiliates shall receive all publications to which the members are entitled except that they shall receive four issues only of the JOURNAL per year.

SECTION 5. Municipal Service Subscribers shall pay for the publications, bulletins, and services as described, at the same annual rate as the dues charged Corporate Members.

SECTION 6. Changes in the amount of annual dues required of Active, Corporate, Associate, and Junior Members, and Affiliates, may be made by the Board in the manner prescribed in Article X for amendment of these By-Laws, provided that such action is completed not less than 90 days prior to the end of the calendar year preceding the effective date of such change.

(By-Laws)

ARTICLE IV

Executive Committee

SECTION 1.

1.1. There shall be an Executive Committee of five members consisting of the President and four Directors. This Committee shall be chosen by the Board at its meeting at the annual convention.

1.2. The President of the Association shall act as Chairman of the Committee, or in his absence, the Committee

shall choose a temporary Chairman from its members; the Secretary of the Association shall act as its Secretary.

1.3. The duties of the Committee shall be to direct the administrative work of the Association and to carry out the policies of the Board between meetings of the latter.

1.4. A quorum of the Committee shall consist of three members.

*(By-Laws)***ARTICLE V*****Duties of Officers and Directors***

SECTION 1. The President shall have general supervision of the affairs of the Association, and shall preside at all conventions of the Association and meetings of the Board. In his absence he shall designate a Presiding Officer to act in his stead at such conventions or meetings. He shall be, ex-officio, a member of all Committees.

SECTION 2. The Vice-President shall assist the President in the performance of his duties, and act in his stead when required. He shall be, ex-officio, a member of all Committees.

SECTION 3.

3.1. The Board of Directors shall be the legal representatives of the Association, and as such shall have full control of the Association in regular convention. It shall make the necessary arrangements for the conventions, and shall have power to expend the funds of the Association, or to invest the same, but must not incur indebtedness beyond the funds in the hands of the Treasurer and Secretary. It shall hold a meeting during the last day, and also a meeting at least one hour before the opening session of each annual convention. Other meetings shall be held at the call of the President, or of any five members of the Board. Notice of all meetings shall be issued by the Secretary at least ten days in advance of such meetings to all members of the Board.

3.2. At the meeting on the last day of the convention, the Board shall appoint the Secretary, who shall serve until the close of the next annual convention or until his successor shall have been appointed. If no annual convention is held prior to July 1, in any

calendar year, the incoming Board of Directors shall appoint the Secretary as soon after July 1 as may be found feasible by said Board.

3.3. Except as otherwise provided in the Constitution and By-Laws, all questions before the Board shall be decided by a majority vote.

SECTION 4.

4.1. The Treasurer shall have charge of the funds of the Association and shall pay bills against the Association when signed by himself and the Secretary. He shall make such reports to the Board as may be necessary or as may be called for by said Board. He may, with the approval of the Board, establish a drawing account for the Secretary.

4.2. He shall be bonded at the expense of the Association, and to an amount to be determined by the Board.

4.3. He shall perform such other duties as may be assigned to him by the Board.

SECTION 5.

5.1. The Secretary shall be an Active Member of the Association. It shall be his duty to attend all conventions and meetings of the Association, and of the Board, prepare the business and duly record the proceedings thereof. He shall see that all moneys due the Association are collected, and shall promptly deposit the same to the credit of the Association. He shall certify to all bills against the Association, and once each month he shall forward to each member of the Board, a financial summary of receipts and disbursements.

5.2. The Secretary shall have charge of the printing and distribution to all

the members of the Proceedings and Transactions of the Association.

5.3. He shall be ex-officio, a member and Secretary of the Committee on Water Works Practice, of the Committee on Water Works Administration and of the Publication Committee.

5.4. He shall make such reports to the Board as may be necessary or may be called for by the Board.

5.5. He shall have charge of the books and records of the Association and shall supervise the work of all employees.

5.6. The books of the Association shall be audited annually by Certified Public Accountants, to be appointed by the Board.

5.7. He shall be bonded at the expense of the Association, and to an amount to be determined by the Board.

5.8. He shall perform such other duties as shall be assigned to him by the Board.

SECTION 6.

6.1. If an Editor is appointed by the Board, he shall perform such duties as shall be assigned to him by the Board. He shall be, ex-officio, a member of such committees as may be designated by the Board.

6.2. He (the Editor) shall see that all papers are edited before publication in the Association's *Journal*; and that all manuals or other material published by, or in the name of the Association, are brought into proper editorial form.

6.3. He shall, with the advice and consent of the Publication Committee, prepare rules which shall govern the preparation, presentation, acceptance and publication of all papers and such other matters of a similar nature as the best interest of the Association may require.

(By-Laws)

ARTICLE VI

Conventions of the Association

SECTION 1.

1.1. The annual convention of the Association shall be held at a time and place to be selected by the Board. Additional conventions of the Association may be held at such times and places as may be selected by the Board. Meetings of the Sections shall be held as determined by the By-Laws of the Sections.

1.2. All conventions and meetings shall be conducted according to "Roberts Rules of Order."

1.3. Each member and guest present at any of the conventions of the Association shall pay a registration fee of such amount as may be determined by the Board.

(By-Laws)

ARTICLE VII

Sections and Divisions

SECTION 1.

1.1. Local Sections may be established by the Board on receipt of a

written request to that effect signed by at least twenty Active or Corporate members of the Association residing

in the territory within which the Local Section is desired. The territory embraced by each Local Section shall be fixed by the Board, and all members of the Association, resident within this territory, shall be members of this Section.

1.2. When, in the opinion of the Board of Directors, the interests of the water works industry and the Association would be advanced by the organization of regional branches of a Section in continental North America outside of the U.S., such branches may be established.

In no case shall a branch of a Section be established with a membership of less than forty. When a branch, or branches, of a Section have been established, AWWA funds allotted to the Section may be used to defray the expenses of the Section Director, Chairman, or Secretary, in attending branch meetings.

1.3. If a member resides within the territory of one Section, and has his principal place of business in the territory of another Section, he may, with the permission of the Board of Directors, elect the Section to which he will belong.

SECTION 2.

2.1. Any member of the Association who resides in a locality which is not included in the territory embraced by an existing Local Section may, upon written request to the Board, be included in the membership of any Local Section. The Secretary of the Association shall notify the Secretary of the Local Section of the enrollment of the member.

2.2. Whenever a new Local Section is formed or an existing Local Section has its territory extended which will include in its territory the locality

where such member resides, he shall automatically be included in the membership of such Local Section.

SECTION 3.

3.1. Should a member of the Canadian Section desire to participate in the activities of any other Section more conveniently located, he may do so under the following conditions:

3.2. He shall make application to the Secretary of the American Water Works Association who shall transmit this request to the governing bodies of the Section concerned. If the latter approve, then the member shall be allowed to acquire membership in the additional Section.

3.3. He shall then be eligible to vote and enjoy all the privileges of both Sections, and may hold office in both Sections, but not simultaneously.

3.4. Any allotment of funds from the Association on his account shall be paid to the Section in which territory he resides. By arrangement, between the governing bodies of the Sections involved, such allotment may be divided between the Sections.

3.5. If a change takes place which makes his own geographic Section equally accessible, membership in the adopted Section shall cease.

SECTION 4.

4.1. A local Section may annually, after filing an application signed by the Section Secretary and endorsed by the Section Chairman, receive from the Association, for use in carrying on the activities of the Section, an allotment for funds from the Association's treasury in such amount as is authorized by the Board under the conditions set forth hereinafter.

4.2. The allotment of Association funds to Sections shall be based upon the dues income received by the Asso-

ciation from members of the Section up to October 1st of the prior calendar year. The amount allotted to a Section may be:

(1) twenty-five per cent of the dues received from Section members up to \$1,500 total, or \$200—whichever is the greater—or

(2) \$375 plus twenty per cent of the dues payments received from Section members above the \$1,500 total in (1) above.

4.3. At each annual meeting of the Board, the Secretary of the Association shall submit to the Board, for its approval, a statement listing the amount of Association funds which each Local Section is entitled to receive for its use during the year. When the Board has approved the Budget of the Association for any year, the Secretary of the Association shall advise the Secretary of each Section concerning the amount of Association funds which the Section is authorized to request for that year. He shall, at the same time, send to the Section Secretary a form for use in applying for funds. Upon return of this application, properly signed by the Section Secretary and endorsed by the Chairman, the allotment for the year shall be forwarded to the Section Secretary. Section officers are not required to request the full amount of the possible allotment to the Section. They may, if the activities of the Section do not require expenditure of all possible allotted funds, request only such portion of any year's allotment as may be needed to carry on the Section activities.

4.4. Association funds allotted to Sections may be used only to carry on such activities as are considered by the Board to be consistent with the Constitution and By-Laws of the Associ-

ation and the By-Laws of the Section. No portion of AWWA-derived funds shall be used to pay dues or fees in any other Association; to pay travel expenses of any Section officer or members outside the Section territory; or to pay fees or expenses to any legislative agent or representative. Charges accruing because of luncheons or dinners at Section meetings or because of entertainment at such functions (other than fees of professional speakers) shall be paid by the Section from its registration fee income or from the sale of tickets for such events.

4.5. The Secretary of each Local Section shall close his accounts as of November 30th each year, and not later than December 15th of each year shall submit a certified copy of his accounts (endorsed by the Section Chairman) to the Secretary of the Association, the same being itemized and showing the amount of funds used during the year and the balance on hand of funds received from the Association which remains to the credit of the Section. This report shall also show the amount of all other funds (cash, bank deposit or invested funds), title to which is vested in the Section, which amount has not been derived from Association allotments, but from registration fees, sale of tickets or any other source. The report of such funds shall include a record of the balance in hand at the beginning of the report year, the additions to and the disbursements of such funds for the year, and the balance remaining at the end of the report year. This accounting is intended for record purposes and for the information of the Board of Directors. It shall not be taken into account by the Board in considering the allot-

ment of Association funds to the Section, unless a Section applies for an allotment in excess of the amount to which it is entitled under the terms of Subsection 4.2.

4.6. Such accounts, when received by the Secretary, shall be referred by him to the Auditor who shall examine them and report to the Board that: (1) the accounts are in order; or (2) that exception is taken to expenditures not in accord with the terms of Subsection 4.5. The Board shall take such action upon the Auditor's recommendation as it deems proper.

4.7. Since Association funds allotted to Sections are intended for use by the Sections, the allotment to any Section in any year shall not be in excess of the difference between an amount equal to twice the possible current annual allotment and the Section's balance of allotment money as of December 1 of the previous year.

4.8. When, in the judgment of the Board, special activities which any Local Section plans to undertake will be of material benefit to the Section and to the Association, the Board may increase the allotment to the Section for the forthcoming year by whatever amount it deems proper.

SECTION 5. National Divisions consisting of superintendents, engineers, chemists, bacteriologists and accountants or other classes of persons included

in the membership of the Association may be established by the Board on the request of thirty members. Any member of the Association may register in any National Division of the Association in which he is interested.

SECTION 6.

6.1. Expenses relating to the necessary operations of National Divisions will be certified for payment by the Secretary of the Association and paid by the Treasurer of the Association when the bills or statements covering such expenses have been approved for payment by the Chairman and Secretary of the Division and duly forwarded to the Association office.

6.2. Unless the Board, by prior action, approves a greater expenditure, the annual operating expenses of a National Division shall not exceed \$100.

SECTION 7. Local Sections and National Divisions shall consist only of members of this Association in good standing. They shall elect their own officers and committees, and may adopt or amend By-Laws for their government not inconsistent with the Constitution and By-Laws of the Association, but these By-Laws or amendments must first be approved by the Board.

SECTION 8. Any Section or Division may be dissolved by the Board for reasons which it believes are good and sufficient.

(By-Laws)

ARTICLE VIII

Publications

All publications of the Association shall be issued under the direction of

the Board and shall be copyrighted as far as is practicable and proper.

(By-Laws)

ARTICLE IX

*Standing Committees*SECTION 1. *General Policy Committee*

1.1. The General Policy Committee shall consist of the President, the four preceding living Past-Presidents; and two members representing the Water and Sewage Works Manufacturers Association. The members of the Committee representing the Water and Sewage Works Manufacturers Association shall be nominated by that Association's Board of Governors subject to acceptance by the Board of Directors. The Chairman of the General Policy Committee shall be the immediate Past-President of the Association, who is, ex officio, a member of the Board (Constitution, Art. III, Sec. 2f.)

1.2. The General Policy Committee shall consider subjects referred to it by the Board, by the Executive Committee of the Board, or by the President; which subjects have to do with general or long-term policies of the Association.

1.3. The recommendations or statements of policy formulated by the General Policy Committee upon any question referred to it, shall be reported to the Board for consideration and further action.

SECTION 2. *Committee on Water Works Practice*

2.1. A Committee on Water Works Practice shall be appointed by the Board at the annual convention. It shall consist of at least five members, at large, and its Chairman shall be ex-officio a member of the Board.

2.2. Any resolution, report or publication which undertakes to establish in the name of the Association, its Sections or its Divisions, technical stand-

ards, manuals of technical practice or recommended technical procedures, shall be submitted to this Committee, and it shall direct all such matters on behalf of the Association.

2.3. It shall appoint such Subcommittees as it may deem necessary to carry on its work properly. It shall submit to the Board, subject to approval, recommendations concerning the organization of new subcommittees. These recommendations shall include a description of the project contemplated and a statement of the scope of the assignment to the proposed subcommittee.

2.4. Technical Standards, manuals of technical practice or recommended technical procedures, when developed and approved by a subcommittee, shall be submitted to the Committee on Water Works Practice for its approval. When approved by the Committee on Water Works Practice, such documents shall be submitted to the Board of Directors for its approval. When such documents have been approved by the board, they shall be published and distributed to the members of the Association.

2.5. The official Standardization Procedure of the AWWA shall govern the routine operations and acts of the Committee on Water Works Practice.

SECTION 3. *Committee on Water Works Administration*

3.1. A Committee on Water Works Administration shall be appointed by the Board at the annual convention. It shall consist of at least five members, at large, and its Chairman shall be ex-officio a member of the Board.

3.2. Any resolution, report or publication which undertakes to establish in the name of the Association, its Sections or its Divisions, professional or administrative standards, administrative practice manuals or recommended administrative procedures, shall be submitted to this Committee, and it shall direct all such matters on behalf of the Association.

3.3. It shall appoint such Subcommittees as it may deem necessary to carry on its work properly. It shall submit to the Board, subject to approval, recommendations concerning the organization of new subcommittees. These recommendations shall include a description of the project contemplated and a statement of the scope of the assignment to the proposed subcommittee.

3.4. Professional or administrative standards, administrative practice manuals, or recommended administrative procedures, when developed and approved by a subcommittee, shall be submitted to the Committee on Water Works Administration for its approval. When approved by the Committee on Water Works Administration such documents shall be submitted to the Board of Directors for its approval. When such documents have been approved by the Board, they shall be pub-

lished and distributed to the members of the Association.

3.5. Insofar as the terms are applicable, the activities of the Committee on Water Works Administration and its subcommittees shall be governed by the Standardization Procedure of the AWWA.

SECTION 4. *Publication Committee*

4.1. A Publication Committee shall be appointed by the Board at the annual convention of the Association. It shall consist of at least five members at large, and its Chairman shall be ex-officio a member of the Board.

4.2. It shall act in an advisory capacity to the Secretary-Editor of the Association in establishing policies related to papers scheduled for presentation at general conventions of the Association or Sections thereof. It shall assist the Secretary in the preparation of the programs for the annual convention of the Association.

4.3. The Committee shall prepare rules which shall govern the preparation, presentation, acceptance and publication of all papers and such other matters of a similar nature as the best interests of the Association may require.

SECTION 5. The Board may at its discretion appoint such other committees as it deems necessary to carry on the work of the Association.

(By-Laws)

ARTICLE X

Amendments

SECTION 1. The Board of Directors may amend these By-Laws in any manner not inconsistent with the Constitution by a two-thirds vote of those voting at any meeting of the Board or by sealed letter ballot, provided that a

copy of such proposed amendment has been mailed by the Secretary to each member of the Board at least thirty days prior to such meeting or letter ballot.

SECTION EXPRESSIONS ON POLICY MATTERS

A resolution adopted by the Board of Directors on July 25, 1947

Sections of the Association desiring to express themselves upon matters of public policy, either by a vote of the members in a regular meeting, or by a vote of the Board of Trustees, or executive group of the Section between regular meetings of the Section, shall confine themselves to practices, policies or procedures within the geographic territory of the Section. If the Section wishes to have consideration given to any matter of public

policy or procedure, having a regional, national or international interest beyond the territorial limit of the Section, this desire for consideration of or expression of opinion shall be routed through the Director representing the Section to the AWWA Board of Directors; the Board will thereupon give such consideration as it wishes to the subject and adopt whatever expression of Association viewpoint is fitting for the circumstances.

POLICY ON CONDUCT OF SECTION MEETINGS

Policy of AWWA

Approved by the AWWA Board of Directors, January 1941

Paragraph 1 amended January 1945

1.1. The registration fees at Section meetings shall provide funds to cover all entertainment. Association funds shall be used for approved purposes only.

1.2. Registration fees at Section meetings may be uniform for all grades of members or may be upon a graduated basis designed to provide, through recorded channels, funds to cover the requirements of Section 1.1, provided that the maximum fee for such purpose shall not exceed \$10 for any class of member.

1.3. Representatives of manufacturers who are not Associate members of the AWWA shall be charged a registration fee double that charged the representatives of manufacturers who are Associate members.

1.4. The Water and Sewage Works Manufacturers Association shall establish its own rulings as to exhibiting at Section meetings, except that no firm or person shall be allowed to exhibit at any convention or Section meeting unless he be an Associate member of the AWWA.

Policy of W&SWMA

The following paragraph from Article XIII, Section 3 of the By-Laws of the Water and Sewage Works Manufacturers Association, as revised on September 15, 1946, is appended for the information of AWWA members:

"Members may not exhibit at conventions or meetings of superintendents or engineers or representatives of water works or of sewage works *not en-*

dorsed by the Board of Governors. No member shall contribute to or arrange special forms of entertainment at any convention or meeting of water works or sewage works representatives. Any such entertainment shall be provided or arranged for by the Association as such and any infraction of this ruling shall be cause for the suspension of the offending member or members."

SECTION AWARD POLICY

A report presented by the General Policy Committee to the Board of Directors of the AWWA on June 3, 1949, and approved by the Board on that date.

IN its discussion of various proposed awards, several of which involved length of service or length of membership in either a Section or the AWWA, the General Policy Committee considered certain basic questions. In considering these questions the committee had in mind the fact that the AWWA is primarily a professional and technical association, whose awards have always been highly prized by their recipients; and it is to insure the maintenance of this high award standard within its proper sphere that the numbered points below are listed for consideration by, and the guidance of, those who have the responsibility either for initiating or conferring the awards.

1. Long service in the water works industry, of itself, may be the basis for the individual company, municipality or state to acknowledge the service of a long-time employee.

2. Long service in the water works industry, of itself, is not sufficient basis for the granting of AWWA or Sectional awards.

3. Neither the AWWA nor its Sections should seek to perform the function of the employer in Point 1, above, where long service is the principal reason for recognition.

4. Long-term membership in the Association is a proper subject of recognition for the various Sections to accord their members.

5. If Sections find it desirable to recognize long-term service by an individual to his community coupled with his membership in the Association, it

would tend to increase the value of the action if some minimum term of membership were agreed upon as the basis for such recognition. The minimum term should be not less than ten years.

6. It is the committee's opinion that the word "Award" should be reserved for honors involving service or a contribution on the part of the member, and a differing designation (for example, "Citation") used to describe those honors having to do largely with tenure.

7. Outstanding achievement in the water works field is, of course, a proper basis for an award by the AWWA or a Section at any time, regardless of length of service or length of membership.

8. "Outstanding achievement" is a relative term; and to the extent that increasing numbers of annual awards become available, the quality of the service and the value of the award tend to depreciate.

In setting down the above points, the committee is attempting to fulfill what it considers to be its larger responsibility in the matter of awards—the establishment of certain broad criteria which will serve to guide the Association and its Sections, so that at all times uniform principles may be applied to the establishment of awards and their too rapid growth limited. This committee does not wish in any way to restrict the freedom of action of any of the Sections but feels that it is the only existing body charged with placing this problem in overall perspective.

American Water Works Association

STANDARDIZATION PROCEDURE

1. General Policy

1.1. The Board of Directors, as the body of elected representatives of the Association's membership, is responsible for (1) approval of the initiation of all standardization activities by any group organized to act for the Association; and (2) approval or withdrawal of all specifications or related documents prepared by any committee of Association Members.

1.2. The Board may appoint committees to consider specific subjects and to operate under direct control of the Board.

1.3.1. Under normal conditions, standardization and procedural matters will be handled under the direction of the Committee on Water Works Practice (By-Laws, Art. IX, Sec. 2) or the Committee on Water Works Administration (By-Laws, Art. IX, Sec. 3). Hereinafter, for brevity, both of these committees will be called "Correlating Committees."

1.3.2. Correlating Committees may organize Working Committees to develop specifications, recommended practice documents or manuals of procedure covering any phase of water supply activity. They shall periodically report to the Board of Directors on the status of all Working Committee assignments. Specifications or manuals prepared by Working Committees and approved by the Correlating Committees shall be submitted to the Board of Directors for approval before they are published as Association documents.

1.4. Any organized Division of the Association may, in regular meeting, recommend the organization of Working Committees to develop specifications, recommended practice documents or manuals related to the field of interest of the Division. Such recommendations, including a definition of the scope of the proposed activity, shall be approved by the appropriate Correlating Committee and the Board before work is initiated. The personnel of such committees shall be reported to the appropriate Correlating Committee and approved by it.

1.5. Any organized Division of the Association shall have authority to organize committees for the conduct of Division routines.

1.6. The Divisions may also appoint "Task Groups" (without committee status) for study, research and report upon subjects of interest to them. These Task Groups shall act under the general supervision of the officers of the Division. If, in the work of these Task Groups, subjects and reports are developed which merit continuation of study at the committee level; then, upon report and recommendation of the Division to the Board of Directors of the Association, any further work may be carried out by existing or activated Working Committees.

1.7. Any work, initiated by a Division, which has for its objective the development of standards, specifications and manuals, shall be carried for-

ward by a Working Committee under the guidance of the appropriate Correlating Committee.

1.8. When a Divisional Working Committee has completed its study, its report shall be approved by the Divi-

sion in regular session, or by letter ballot of the Executive Committee of the Division, before it is submitted to the Correlating Committee and to the Board of Directors for approval as an Association document.

2. Definition of Terms

2.1. The term "Tentative Standard" shall be applied to those specifications, methods, and definitions that have been approved and accepted by the Board in accordance with the procedure established therefor, for publication and use preliminary to adoption as standard, thus providing opportunity for suggestion and criticism.

2.2. The term "Standard" shall be applied collectively to standard speci-

fications, standard methods, and standard definitions that have been approved and adopted by the Board in accordance with the procedure established therefor.

2.3. The terms "Recommended Practice," "Recommended Procedure" or "Manual" shall be applied to procedures, processes and methods not ordinarily subject to contract between purchaser and manufacturer.

3. Technical Committees

3.1. Organization.

3.1.1. Establishment of Working Committees intended to function under the jurisdiction of Correlating Committees shall, in all instances, be subject to prior approval by the Board of Directors.

3.2. Membership.

3.2.1. Membership on such committees may be held only by individual members of AWWA, official representatives of Corporate Members or Municipal Service Subscribers, or persons designated to act on such committees as representatives of Associate Members.

3.2.2. When a committee activity would be benefited by contact with a nonmember of recognized professional or technical standing, such a person may be added to the committee as a Consultant, but shall not have voting power.

3.2.3. When a Working Committee is established for the purpose of developing standards for water works construction or operating materials or equipment, the membership of the committee shall include consumers, representatives of producers of the material or equipment, and independent interests, defined as follows:

Consumers—those using the material or equipment under consideration who are neither directly nor indirectly related to the production, promotion or marketing thereof.

Producers—those who are directly or indirectly associated with the production, promotion, marketing or servicing of the commodity.

Independent Interests—educators, consulting engineers or others, including federal, state or local personnel having substantial interest in water resources or water supply operations.

3.2.4. The majority represented in the membership of technical committees shall be consumers and/or independent interests. Care shall be taken to provide sufficient representation of producers to insure adequate, objective information concerning the technical problems and economics of production of the commodity, as well as to assure the development of a standards document which is equitable.

3.3. Appointments and Removals.

3.3.1. Appointments to and removals from such Working Committees shall be made by the Chairman of the appropriate Correlating Committee, with the advice and consent of the Chairman of the Working Committee under consideration.

3.3.2. Whenever the appointment of producers' representatives would be facilitated thereby, the advice of those Associate Member firms engaged in the production of materials related to such committee activity should be obtained to guide in the selection of one or more persons as official representatives of the producer group.

3.3.3. Membership on a technical committee may be terminated by the Chairman of the responsible Correlating Committee because of inactivity of the person removed; or whenever the progress of the committee would be expedited by such change. Such changes in committee personnel shall be reported to the Board at one of its stated meetings.

3.3.4. If the balance within a Working Committee would be modified by the change of employment of any member, this may be the basis for dropping such person from the committee.

3.3.5. Membership on all technical committees shall ordinarily be for a period of one year (from the date of

one annual meeting of the Board of Directors to the next), but may be extended by specific action of the Board from year to year until the project assigned to the committee has been completed.

3.4. Committee Action.

3.4.1. The chairman of any Working Committee is responsible for:

3.4.1.1. Bringing formally to the attention of all committee members the written text of any report proposed to be made for and by the committee;

3.4.1.2. Recording the affirmative and negative votes (by name) if action is taken during a meeting of the committee; or

3.4.1.3. Obtaining, by letter ballot, record of approval, disapproval or abstention of each committee member; and

3.4.1.4. Reporting formally to the Correlating Committee the expressed attitude of each committee member upon a committee report.

3.4.2. When Working Committee action is taken either in a meeting or by letter ballot, a majority of the total number of committee members (present or absent) shall approve the action proposed before the report is put forward to the Correlating Committee.

3.5. When a Working Committee has completed the task assigned to it, it may be discharged; or it may be continued for a time as a referee group to consider comments made by the members of the Association upon the document prepared by it. When a Working Committee has been discharged, a member of the Association may be appointed as "Adviser" to develop interpretations or recommendations concerning questions derived from the existing standard.

3.5.1. Advisers may also be appointed by Correlating Committees to

make recommendations or render opinions concerning subjects which have

not been assigned to Working Committees.

4. Procedure Governing the Adoption of Standards, Recommended Practice Documents or Manuals

4.1. The procedure governing the promulgation of standards shall be as follows:

4.1.1. *Acceptance* of tentative standards, tentative revisions of standards, and revisions of tentative standards, and *withdrawal* of standards, tentative standards, and tentative revisions of standards, shall be either by action of the Board of Directors as provided in Paragraphs 4.1.2 and 4.1.3 or of the Correlating Committee as provided in Paragraph 4.1.4. Adoption or withdrawal of Standards or related documents shall be by action of the Board of Directors either in regular meeting or by letter ballot.

4.1.2.1. An affirmative vote, amounting to two-thirds of the Board Members voting at a stated meeting, shall be required on all Working or Correlating Committee recommendations, except those involving immediate adoption or withdrawal of standards and immediate revision of standards. (For procedure on these exceptions see Paragraph 4.1.3.)

4.1.2.2. Working or Correlating Committee recommendations submitted to the Board for approval or withdrawal by letter ballot must obtain an affirmative vote of eight-tenths of the Board Members before their approval.

4.1.2.3. Working Committee recommendations may be amended by an affirmative vote amounting to two-thirds of those voting, subject to approval of the revised recommendation by letter ballot of the committee.

4.1.2.4. Should the Working Committee not accept the Board's revisions

of its report, action upon the report shall be deferred until the next stated meeting of the Board, when, with a representative of the committee present, the questions at issue shall be fully reviewed and a committee recommendation again put into approval routine within the committee and within the Board.

4.1.2.5. Action leading to withdrawal of existing specifications, standards, or procedural documents, may be initiated by the Board of Directors, by the appropriate Correlating Committee, by the Working Committee, or by the Adviser on the subject document. When action looking toward withdrawal of any document has been initiated, it shall follow the procedure set forth hereinabove.

4.1.3. If immediate adoption, either of a proposed new standard or of a revision of an existing standard, is recommended (without the usual preliminary publication as tentative) a nine-tenths rather than a two-thirds affirmative vote of Board members present and voting shall be required. In such cases, no amendments shall be permitted during the meeting except by unanimous consent.

4.1.4. Working Committee recommendations on *acceptance* of tentative standards, tentative revisions of standards and revisions of tentative standards; and on *withdrawal* of standards, tentative standards and tentative revisions of standards; may also be presented between annual meetings to the Correlating Committee for consideration and approval. The Correlating

Committee shall determine whether the requirements of committee procedure have been met and whether the committee has reached a satisfactory consensus.

4.1.5. During consideration of the recommendation of a Working Committee at a meeting of a Correlating Committee, representatives of the Working Committee may be present and participate in the discussion.

4.1.6. Recorded approval by two-thirds of the members of a Correlating Committee is required before a report may be submitted to the Board for its approval. If the Correlating Committee takes favorable action upon the recommendation, the document shall be submitted to the Board for its approval at a meeting of the Board or by letter ballot.

4.2. The requirements of Sec. 4.1 shall be applicable also in the establishment of recommended practice documents or manuals of procedure.

4.3. Reports, resolutions and recommendations pertaining to or involving the use, or proposed use, in a standard or tentative standard, of any device or process which forms the subject matter of any existing patent, copyright or trade-mark, shall first be submitted to the Correlating Committee with a statement which records the number, expiration date and name of holder of the patent, etc.; together with a statement which records the reasons underlying the action recommended by the Working Committee. In such instances, the recorded dissent of two members of a Correlating Committee shall be sufficient to suspend action upon the Working Committee's report.

4.4. All specifications, recommended practice documents and/or manuals of procedure shall (except as provided in 4.1.3) be termed "Tentative" when first

approved by the Board. *They shall, if no modifications are proposed, be termed "Standard" after a period of one year.* The Board of Directors shall at its stated meetings take due note of the status of tentative standards and may, by two-thirds affirmative vote, suspend for a stated or an indefinite period the designation of any document as Standard.

4.5. For the duration of any period of national emergency, when a shortage of materials exists and supplies are restricted by governmental action, the following policy is approved:

4.5.1. A Special Committee consisting of the Chairmen of the Correlating Committees and the Secretary is authorized to consider revisions, or modifications of existing specifications or preparation of new specifications to meet conditions set up by the national emergency.

4.5.2. When the content of the text has been agreed upon by the three members of the Special Committee, the material shall be submitted by letter-ballot to the appropriate Correlating Committee and to the Board of Directors.

4.5.3. A period of two weeks shall be allowed for the filing of objections to, or acceptance of, the specifications. If a consensus in approval develops, the material shall be issued either as (1) tentative AWWA specifications, (2) emergency specifications, or (3) an emergency rider to existing specifications.

4.6. Standards or related documents prepared by joint or inter-association committees upon which the American Water Works Association has appointed a representative and for which the Association acts as co-sponsor, shall be approved by the Correlating Committee and by the Board of Directors

in the manner stipulated for AWWA documents in Sec. 4.1, 4.2, 4.3 above.

4.7. Standards or related documents prepared by a committee of other associations to which committee the AWWA has been invited and to which it has appointed one or more representatives, shall not be subject to the approval routine of the AWWA. Representatives upon such committees shall be appointed by the Correlating Committee with the approval of the

Board and may be withdrawn from the activity at any time for cause satisfactory to the Board. Such representatives shall report the activities and progress of their work to the Correlating Committee not less often than once each year. They may at any time refer to the Chairman and/or Secretary of the Correlating Committee for advice concerning, or assistance related to, the work of the committees, to which they have been appointed.

Approved by the AWWA Board of Directors, May 10, 1946

Revised October 6, 1950.

HONORARY AWARDS

Honorary Membership

Honorary Membership in the American Water Works Association is provided for in the By-Laws of the Association, Article I, Sections 1 and 2. The method of the election of Honorary Members is stated in the By-Laws, Article II, Section 1. The presentation of Honorary Memberships usually takes place during the Annual Convention of the Association. The present Honorary Members of the Association, with the years of their election, are:

JOHN WALTER ACKERMAN.....	1941	NORMAN JOSEPH HOWARD.....	1952
THOMAS LAMPKIN AMISS.....	1949	LOUIS RICHARD HOWSON.....	1948
ROBERT WILLIAM ANGUS.....	1945	WILLIAM WHITEHEAD HURLBUT.....	1943
MOSES NELSON BAKER.....	1936	CHARLES GILMAN HYDE.....	1939
EDWARD BARTOW.....	1936	HARRY EDWARD JORDAN.....	1939
JOHN ROBERT BAYLIS.....	1946	WENDELL RICHARD LADUE.....	1953
HENRY BERRY.....	1949	BEEKMAN COX LITTLE.....	1939
GEORGE WILLIAM BOOTH.....	1945	M'KEAN MAFFITT.....	1949
THOMAS BROOKS.....	1937	SAMUEL BROOKS MORRIS.....	1951
WILLIAM WHITLOCK BRUSH.....	1937	HOWARD SCOTT MORSE.....	1952
GEORGE CYRUS BUNKER.....	1943	JOHN HUEY MURDOCH JR.....	1950
CHARLES BAKER BURDICK.....	1944	REEVES NEWSOM.....	1953
JAMES MORTON CAIRD.....	1942	WILLIAM JOHN ORCHARD.....	1937
WILLARD TOWNSHEND CHEVALIER.....	1945	MALCOLM PIRNIE.....	1947
CHARLES RAYMOND COX.....	1951	SHEPPARD TAPPEN POWELL.....	1951
CARLETON EMERSON DAVIS.....	1939	GEORGE WESLEY PRACY.....	1950
WILFRED WILLIS DEBERARD.....	1942	EDGAR GOWAR RITCHIE.....	1946
ROSS LEONARD DOBBIN.....	1937	NATHAN THOMAS VEATCH.....	1952
FRANK EUGENE HALE.....	1944	THOMAS HOLLIS WIGGIN.....	1944
JACK JONES HINMAN JR.....	1950	ABEL WOLMAN.....	1948

The Harry E. Jordan Achievement Award

Established by the Association in 1951 for the recognition, as circumstances warrant, of distinguished public service outside the line of duty, the Harry E. Jordan Achievement Award was so named the following year in tribute to the superior service rendered by the Association's Secretary in the fifteen years since he took office in 1937.

ABEL WOLMAN..... 1952

The John M. Diven Memorial Medal

The John M. Diven medal was established by the Association in 1925 in memory of John M. Diven, a water works superintendent of many years experience who served as the Association's President in 1892, Vice-President

1887-89, Treasurer 1890-91, 1903-13, Secretary 1890-91, 1903-23, and Editor 1914-16.

The award is made each year to the member who has rendered the most outstanding service to the Association during the year, as determined by a committee appointed to submit a report which is subject to ratification by the Board of Directors. The medal is a bronze plaque of Mr. Diven.

*GEORGE WARREN FULLER.....	1926	WILLIAM VICTOR WEIR.....	1940
ARTHUR ELLSWORTH GORMAN.....	1927	WILLIAM WHITEHEAD HURLBUT.....	1941
*WILLARD SAMUEL CRAMER.....	1928	SAMUEL FRANK NEWKIRK JR.....	1942
*JAMES EDWIN GIBSON.....	1929	EARL DEVENDORF.....	1943
ROSS LEONARD DOBBIN.....	1930	LOUIS RICHARD HOWSON.....	1944
MALCOLM PIRNIE.....	1931	No Award.....	1945
WILLIAM WHITLOCK BRUSH.....	1932	JAMES CLARKE HARDING.....	1946
SAMUEL BROOKS MORRIS.....	1933	ELLSWORTH LINCOLN FILBY.....	1947
LEONARD PERCY WOOD.....	1934	*ASBURY CLINTON DECKER.....	1948
LINN HARRISON ENSLOW.....	1935	HARRY ANDREW FABER.....	1949
HARRY EDWARD JORDAN.....	1936	JOSEPH PHILIP SCHWADA.....	1950
ABEL WOLMAN.....	1937	WENDELL RICHARD LADUE.....	1951
*WILLIAM CURTIS MABEE.....	1938	ERNEST W. WHITLOCK.....	1952
HALLETT FRANCIS SMITH.....	1939	JAMES E. KERSLAKE.....	1953

* Deceased.

The John M. Goodell Prize

The John M. Godell prize was established in 1931, under the terms of an endowment by *Engineering News-Record*, as a memorial to John M. Godell, a former editor of *Engineering News-Record* and the editor of the JOURNAL American Water Works Association, 1917-21. In 1951, when the award had been made for the twentieth time, the Board voted that AWWA itself assume the support of the award, which consists of a certificate and the sum of \$75.

The prize is awarded annually to the member who has made the most notable contribution to the science or practice of water works development, usually as recorded in the form of a paper published in the Association's JOURNAL. The selection is made by a committee, appointed for the purpose, which submits a report subject to Board ratification.

JOHN ROBERT BAYLIS.....	1932	MELVIN LORENIUS ENGER	} Jointly.....	1940
CHARLES HERBERT SPAULDING.....	1933	THOMAS HOLLIS WIGGIN		
WILLARD TOWNSEND CHEVALIER.....	1934	PAUL WEIR.....		1941
FRANK EUGENE HALE.....	1935	RAY FREEMAN GOUDEY.....		1942
MATHEW MICHAEL BRAIDECHE.....	1936	WILFRED FRANCIS LANGELIER	} Jointly.	1943
LAURANCE EDWARD GOIT	} Jointly.....	HARVEY FRED LUDWIG		
HARRY HAYES		NOEL STILLWELL CHAMBERLIN	} Jointly.	1944
VANCE CHRISTOPHER LISCHER.....	1938	JOHN RICHARD GLASS		
ALBERT GEORGE FIEDLER	} Jointly.....	HANS VICTOR PEDERSEN.....		1945
DAVID GROSH THOMPSON		CARL MARTIN RIEDEL.....		1946

LOUIS RICHARD HOWSON.....	1947	BERRY; H. A. FABER; R. J. FAUST;	
MELVIN PROSS HATCHER.....	1948	W. V. WEIR; H. T. DEAN, <i>Consultant</i> ; and L. H. ENSLOW, <i>ex-officio</i> ..	1950
LAURIE MOYES LEEDOM.....	1949	MALCOLM STRONG MCILROY.....	1951
Special Committee on AWWA Policy re Fluoridation of Public Water Sup- plies (A. P. BLACK, <i>Chairman</i> ; A. E.		JOSEPH M. SANCHIS } Jointly.....	1952
EDWARD W. MOORE.....	1953	JOHN C. MERRELL JR. }	

The Nicholas S. Hill Jr. Cup

The Nicholas S. Hill Jr. Cup is an award which was established by Past-President Nicholas S. Hill Jr. during his term of office in 1915-16. It is awarded at each Annual Convention to that Local Section of the Association which has made the largest percentage gain in membership during the year.

Under the original terms of the award the cup was to become the permanent possession of the Section which first won it for three successive years. This was first accomplished by the Minnesota Section, but due to the unusual conditions then prevailing as a result of the war the Section returned the cup for continued competition. When the North Carolina Section won the cup for the third successive year in 1924 the Section returned it to the Association with the stipulation that no Section should again win it permanently. The names of the winning Sections are engraved upon the cup.

CANADIAN SECTION.....	1916	INDIANA SECTION.....	1937
MINNESOTA SECTION.....	1917-'18-'19	MICHIGAN SECTION.....	1938
CANADIAN SECTION.....	1920	WEST VIRGINIA SECTION.....	1939
CENTRAL STATES SECTION.....	1921	SOUTHWEST SECTION.....	1940
NORTH CAROLINA SECTION....	1922-'23-'24	PACIFIC NORTHWEST SECTION.....	1941
CALIFORNIA SECTION.....	1925-'26	NORTH CAROLINA SECTION.....	1942
FLORIDA SECTION.....	1927-'28	FLORIDA SECTION.....	1943
PACIFIC NORTHWEST SECTION.....	1929	MISSOURI VALLEY SECTION.....	1944
SOUTHEASTERN SECTION.....	1930	SOUTHWEST SECTION.....	1945
PACIFIC NORTHWEST SECTION.....	1931	KANSAS SECTION.....	1946
CALIFORNIA SECTION.....	1932	FLORIDA SECTION.....	1947
MONTANA SECTION.....	1933	SOUTHWEST SECTION.....	1948
CANADIAN SECTION.....	1934	ARIZONA SECTION.....	1949
VIRGINIA SECTION.....	1935	KANSAS SECTION.....	1950-'51
ROCKY MOUNTAIN SECTION.....	1936	NEBRASKA SECTION.....	1952

The Franklin Henshaw Cup

The award of the Franklin Henshaw Cup was established in 1934 as the result of a gift to the Association by Franklin Henshaw. At each Annual Convention this cup is awarded, for one year, to that Local Section which has held the best attended meeting during the year past, as measured by the percentage of the Section's members present.

MONTANA SECTION.....	1935-'36	PACIFIC NORTHWEST SECTION.....	1938
INDIANA SECTION.....	1937	NORTH CAROLINA SECTION.....	1939

WISCONSIN SECTION.....	1940	CUBAN SECTION.....	1946
PACIFIC NORTHWEST SECTION.....	1941	OHIO SECTION.....	1947
MINNESOTA SECTION.....	1942-'43	CUBAN SECTION.....	1948
No Award.....	1944	ARIZONA SECTION.....	1949
WISCONSIN SECTION.....	1945	CANADIAN SECTION.....	1950
		CUBAN SECTION.....	1951-'52

The Old Oaken Bucket

The Old Oaken Bucket is a symbolic award which was established in 1939. It is awarded at each annual convention to that Section of the Association which has the largest membership. The trophy is a veritable antique from an old New England farmstead and is particularly appropriate as a water works trophy because of its rarity.

CALIFORNIA SECTION..... 1939-'52

The George Warren Fuller Memorial Awards

These awards were established in 1937, and are given each year to members of the Association, designated by the Sections, for their distinguished service in the water supply field and in commemoration of the sound engineering skill, the brilliant diplomatic talent, and the constructive leadership of men in the Association which characterized the life of George Warren Fuller—one of America's most eminent engineers.

Each section, each year, may designate one of its members to receive a Fuller Award. Such designation is presumed to recognize publicly the contribution toward advancement of water works practice the individual has made within the particular Section selecting him for the award. If two members have joined in a common project which the Section wishes to recognize, both participants may be jointly designated for the award.

These awards are in the form of an engraved certificate signed by the President and Secretary of the Association.

In 1942 the Fuller Awardees formed the "George Warren Fuller Award Society" which gathers each year in a breakfast meeting during the annual convention. The first chairman of this group was Wendell R. LaDue. The 1953-54 chairman is A. P. Black, and the secretary is P. S. Wilson.

CONVENTIONS AND PAST-PRESIDENTS

The President's one-year term of office ends on the last day of the convention

1	ST. LOUIS, MO.....	March	29-31, 1881	*JOHN T. FOSTER
2	COLUMBUS, OHIO.....	March	14-16, 1882	*JOHN T. FOSTER
3	BUFFALO, N. Y.....	May	15-17, 1883	*JOHN T. FOSTER
4	CINCINNATI, OHIO.....	April	15-17, 1884	*JOHN G. BRIGGS
5	BOSTON, MASS.....	April	21-23, 1885	*L. H. GARDNER
6	DENVER, COLO.....	June	23-25, 1886	*PETER MILNE JR.
7	MINNEAPOLIS, MINN.....	July	13-15, 1887	*B. F. JONES
8	CLEVELAND, OHIO.....	April	17-19, 1888	*J. T. FANNING
9	LOUISVILLE, KY.....	April	16-18, 1889	*A. N. DENMAN
10	CHICAGO, ILL.....	May	20-24, 1890	*JOHN H. DECKER
11	PHILADELPHIA, PA.....	May	14-17, 1891	*WILLIAM BENEDICT BULL
12	NEW YORK, N. Y.....	May	17-19, 1892	*JOHN M. DIVEN
13	MILWAUKEE, WIS.....	Sept.	5-9, 1893	*G. H. BENZENBERG
14	MINNEAPOLIS, MINN.....	Aug.	21-23, 1894	*JAMES PETER DONAHUE
15	ATLANTA, GA.....	May	28-30, 1895	*WILLIAM RYLE
16	INDIANAPOLIS, IND.....	May	26-28, 1896	*WILLIAM G. RICHARDS
17	DENVER, COLO.....	June	8-10, 1897	*F. A. W. DAVIS
18	BUFFALO, N. Y.....	June	14-18, 1898	*JOHN CAULFIELD
19	COLUMBUS, OHIO.....	May	16-19, 1899	*JOSEPH A. BOND
20	RICHMOND, VA.....	May	15-18, 1900	*R. M. CLAYTON
21	NEW YORK, N. Y.....	June	17-22, 1901	*CHARLES E. BOLLING
22	CHICAGO, ILL.....	June	10-13, 1902	*WILLIAM R. HILL
23	DETROIT, MICH.....	June	23-26, 1903	*CHARLES H. CAMPBELL
24	ST. LOUIS, MO.....	June	6-11, 1904	*L. N. CASE
25	WEST BADEN, IND.....	May	9-12, 1905	*MORRIS R. SHERRERD
26	BOSTON, MASS.....	June	26-30, 1906	*BENJAMIN C. ADKINS
27	TORONTO, ONT.....	June	17-21, 1907	*DABNEY H. MAURY
28	WASHINGTON, D. C.....	May	11-16, 1908	*GEORGE H. FELIX
29	MILWAUKEE, WIS.....	June	7-12, 1909	*D. W. FRENCH
30	NEW ORLEANS, LA.....	April	25-29, 1910	*WILLIAM PITT MASON
31	ROCHESTER, N. Y.....	June	5-10, 1911	*JOHN WATSON ALVORD
32	LOUISVILLE, KY.....	June	3-7, 1912	*ALEXANDER MILNE
33	MINNEAPOLIS, MINN.....	June	23-27, 1913	*DOW R. GWINN
34	PHILADELPHIA, PA.....	May	11-15, 1914	*ROBERT J. THOMAS
35	CINCINNATI, OHIO.....	May	10-14, 1915	*GEORGE GOODELL EARL
36	NEW YORK, N. Y.....	June	5-9, 1916	*NICHOLAS SNOWDEN HILL JR.
37	RICHMOND, VA.....	May	7-11, 1917	*LEONARD METCALF
38	ST. LOUIS, MO.....	May	13-17, 1918	*THEODORE A. LEISEN
39	BUFFALO, N. Y.....	June	9-13, 1919	*CHARLES R. HENDERSON
40	MONTREAL, QUE.....	June	21-25, 1920	CARLETON E. DAVIS
41	CLEVELAND, OHIO.....	June	6-10, 1921	BEEKMAN C. LITTLE
42	PHILADELPHIA, PA.....	May	15-19, 1922	EDWARD BARTOW
43	DETROIT, MICH.....	June	21-25, 1923	*WILLARD S. CRAMER
44	NEW YORK, N. Y.....	May	19-23, 1924	*GEORGE W. FULLER
45	LOUISVILLE, KY.....	Apr. 27-May 1,	1925	*FRANK C. JORDAN
46	BUFFALO, N. Y.....	June	7-11, 1926	*HARRY F. HUY
47	CHICAGO, ILL.....	June	6-11, 1927	*ALLAN W. CUDEBACK

48 SAN FRANCISCO, CALIF....	June	11-15, 1928	*JAMES E. GIBSON
49 TORONTO, ONT.....	June	24-28, 1929	WILLIAM W. BRUSH
50 ST. LOUIS, MO.....	June	2-6, 1930	JACK J. HINMAN JR.
51 PITTSBURGH, PA.....	May	25-29, 1931	*GEORGE H. FENKELL
52 MEMPHIS, TENN.....	May	2-6, 1932	ROSS L. DOBBIN
53 CHICAGO, ILL.....	June	12-16, 1933	GEORGE W. PRACY
54 NEW YORK, N. Y.....	June	4-8, 1934	MALCOLM PIENIE
55 CINCINNATI, OHIO.....	May	6-10, 1935	HARRY E. JORDAN
56 LOS ANGELES, CALIF.....	June	8-12, 1936	*FRANK A. BARBOUR
57 BUFFALO, N. Y.....	June	7-11, 1937	WILLIAM W. HURLBUT
58 NEW ORLEANS, LA.....	April	24-28, 1938	*EUGENE F. DUGGER
59 ATLANTIC CITY, N. J.....	June	11-15, 1939	REEVES NEWSOM
60 KANSAS CITY, MO.....	April	21-25, 1940	*J. ARTHUR JENSEN
61 TORONTO, ONT.....	June	22-26, 1941	NORMAN J. HOWARD
62 CHICAGO, ILL.....	June	21-25, 1942	LOUIS R. HOWSON
63 CLEVELAND, OHIO.....	June	15-18, 1943	ABEL WOLMAN
64 MILWAUKEE, WIS.....	June	13-16, 1944	SAMUEL B. MORRIS
65 <i>No Convention</i>	—	— 1945	SAMUEL F. NEWKIRK JR.
66 ST. LOUIS, MO.	May	6-10, 1946	LEONARD N. THOMPSON
67 SAN FRANCISCO, CALIF....	July	21-25, 1947	WENDELL R. LADUE
68 ATLANTIC CITY, N. J.....	May	3-7, 1948	N. T. VEATCH
69 CHICAGO, ILL.....	May	30-June 3, 1949	LINN H. ENSLOW
70 PHILADELPHIA, PA.....	May	21-26, 1950	A. P. BLACK
71 MIAMI, FLA.....	Apr.	29-May 4, 1951	W. VICTOR WEIR
72 KANSAS CITY, MO.....	May	4-9, 1952	ALBERT E. BERRY
73 GRAND RAPIDS, MICH.....	May	10-15, 1953	CHARLES H. CAPEN

* Deceased.

NEW MEMBERS

This list supplements the 1952 AWWA Directory by listing all members who have joined or been reinstated in the Association from Oct. 1, 1952, to July 1, 1953. The next full list of all AWWA members will appear in the 1954 Directory, in accordance with the policy of publishing the membership lists in even-numbered years only. A full list of Associate Members, however, may be found in this issue on p. 88.

- Abbott, George A.**, Chief of Plants, Board of Water & Elec. Light Comrs., Box 570, Lansing, Mich. (Jan. '53) *M*
- Abdel-Aziz, M. T. I.**, San. Engr., Village Services Dept., Ministry of Munic. & Rural Affairs, Cairo, Egypt (Jan. '53) *P*
- Abramson, Martin**, Assoc. Utilities Engr., State Public Utilities Com., State Bldg., Civic Center, San Francisco, Calif. (Apr. '53) *M*
- Acree, John E.**, Engr., Water Dept., The Empire Dist. Elec. Co., Aurora, Mo. (July '53) *M*
- Adams, John C.**, City Engr., Water Supt., 109—1st Ave., S.E., Little Falls, Minn. (Jan. '53) *M*
- Alblon, Village of**, of Thomas J. Coffee, Supt., Public Works, Albion, N.Y. (Munic. Sv. Sub. July '43)
- Alden, Charles**, Sales Dept., Neptune Meter Co., 701 E. 3rd St., Los Angeles, Calif. (Jan. '53)
- Alexander, Chalmers W.**, Comm., City of Jackson, Box 17, Jackson, Miss. (Apr. '53)
- Alexander, J. Harry, Jr.**, Treas. & Gen. Mgr., J. A. Simpson Co., Inc., 2 Cedar Pl., Garden City, N.Y. (Oct. '52)
- Alfreds, Donald B.**, Sales Engr., Rockwell Mfg. Co., 3136 E. 11th St., Los Angeles 23, Calif. (Apr. '53) *MR*
- Allen, J. W.**, Owner, Eagle Home & Building Insulators, 404 E. Markham, Little Rock, Ark. (Jan. '53)
- Allen, Ralph F.**, Water Supply Supt., Eagle Grove, Iowa (Oct. '52)
- Ames, Lewis**, Supt., Water System, Eureka Springs, Ark. (Affil. Jan. '45)
- Anderegg, Rupert A.**, Pres., The Anderegg Co., 3954 Brotherton Rd., Cincinnati 9, Ohio (Jan. '53)
- Anderson, Elmer W.**, Foreman-Meter Reader, Water Dept., 414 S. E. 19th, Oklahoma City, Okla. (Apr. '53) *M*
- Anderson, J. Newton**, Pres., Anderson Chemical Co., Box 992, Macon, Ga. (Jan. '53)
- Angeletti, Amo**, Town Clerk & Water Supt., Route 6, Box 960, Hillsboro Beach, Pompano, Fla. (Apr. '53) *M*
- Aniol, Edward W.**, Supt., Water Dept., 15842 Philomene, Allen Park, Mich. (July '53) *M*
- Anthony, E. A.**, Secy. & Treas., Archer Development Co., Inc., Box 1994, Houston, Tex. (Apr. '53) *M*
- Apfel, Earl T.**, Director, Geology and Mineralogy Div., Inst. of Industrial Research, Syracuse Univ., Syracuse 10, N.Y. (Jan. '53) *R*
- Arabian American Oil Co.**, E. K. Schulze, Asst. Chief Engr., 505 Park Ave., New York 22, N.Y. (Corp. M. Jan. '53)
- Arcade, Village of**, Luke F. Sharon, Supt., Public Works, 17 Church St., Arcade, N.Y. (Munic. Sv. Sub. Jan. '53)
- Arenas, Manuel Valdes**, Ingeniero Civil, Donato Guerra 1-206, Mexico, D.F., Mexico (Apr. '53) *M*
- Armstrong, Robert H.**, Sales Engr., Rockwell Mfg. Co., Empire State Bldg., New York, N.Y. (Jan. '53) *M*
- Arnett, Walter A.**, Sales Repr., Mueller Co., Box 1857, Salt Lake City, Utah (Apr. '53)
- Arnold, Roy N.**, Supt., Water Dept., City Hall, Whitefish, Mont. (Apr. '53) *M*
- Atkins, Chester S.**, Supt. of Water, Box 152, Pasadena, Tex. (Apr. '53) *M*
- Auer, Clifford W.**, Salesman, Mueller Co., 4160 N. 42nd St., Milwaukee 16, Wis. (Jan. '53) *MR*
- Augustine, Wilson R.**, Michigan Repr., Mueller Co., 47501 Powell Rd., Plymouth, Mich. (Apr. '53)
- Aurora Water Dept.**, Paris L. Guy, Supt., Sanitation Dept., 16th & Elmira Sts., Aurora, Colo. (Corp. M. Oct. '52)
- Automatic Control Co.**, J. S. Williams, Vice-Pres., 1005 University Ave., St. Paul 4, Minn. (Assoc. M. Apr. '46)
- Avrett, William L., Jr.**, Public Health Dept., SVPM, Palembang, Sumatra, Indonesia (Apr. '56) *P*
- Axtell, City of**, Harlan Elders, Supt. of Utilities, Axtell, Kan. (Munic. Sv. Sub. Jan. '53)
- Babcock, Russell H.**; see Foxboro Co.
- Bacon, John Otis**, Supt. of Distr., Florida Utilities Corp., 520 Park Ave., Winter Park, Fla. (Jan. '53) *M*
- Bailey, Leon**, Supt., Monmouth Consolidated Water Co., 226 Broadway, Long Branch, N.J. (Apr. '53)
- Baker, G. M., & Son, Inc.**, W. H. Boger Sr., 149 Hosack St., Columbus 7, Ohio (Assoc. M. July '53)
- Baker, Ralph G.**, Regional Sales Repr., De Laval Steam Turbine Co., 122 S. Michigan Ave., Chicago 3, Ill. (Jan. '53)
- Baker, W. W.**, City Engr., 1719 N. Tulsa St., Oklahoma City, Okla. (Apr. '53)
- Bakken, J. Durrell**, 528—2nd St., Wahpeton, N.D. (Jr. M. Jan. '53)
- Baldwin, Martin Walter**, Water Works Foreman, Water Works, Meridian, Miss. (Jan. '53)
- Bardin, William J.**, Asst. Dist. Mgr., Armco Drainage & Metal Products, Inc., 2600—7th St., Berkeley 10, Calif. (Jan. '53) *R*
- Bares, Alvin G.**, Supt., Filtration Plant, Port Washington, Wis. (Jan. '53)
- Barnethy, O. D.**; see Burkburnett (Tex.)
- Bartlett, H. B.**, Paden & Bartlett, 338 New England Bldg., Topeka, Kan. (Oct. '52)
- Barton, Harmon J., Jr.**, Elec. Engr., St. Louis County Water Co., 6600 Delmar Blvd., University City 5, Mo. (Apr. '53) *M*
- Barton, Ronald N.**, Asst. Mgr., Transite Pipe Dept., Johns-Manville Sales Corp., 1530 Guild Hall Bldg., Cleveland 15, Ohio (Jan. '53)
- Bates, Thomas A.**, Administrative Aide, Water Dept., 1612 E. Wardlow Rd., Long Beach 7, Calif. (Jan. '53) *M*
- Baynard, William G.**, Sales Engr., John Wiley Jones Co., 610 Mc-Ninch St., Charlotte, N.C. (Jan. '53) *P*
- Beam, Charles H.**, Mgr., Fox Chapel Authority, Fox Chapel Rd., Pittsburgh 15, Pa. (Jan. '53) *P*
- Bentley, F. K.**, Design Engr., Black & Veatch, 4706 Broadway, Kansas City 2, Mo. (Apr. '53) *RP*
- Bentley, Gale E.**, Sales & Service, Buffalo Meter Co., 514 Euclid St., Middletown, Ohio (Jan. '53)
- Beaven, Charles G.**, Supt. of Filtration, Water Dept., 3rd & Walnut Sts., Evansville, Ind. (Jan. '53)
- Beck, E. A.**; see Henrico (Va.)
- Beeth, Gunnar**, Boutz & Beeth, Apdo. 4394, Este D.F., Venezuela (Jan. '49)

- Belzer, John Henry**, Sales Engr., Johns-Manville Sales Corp., Box 1199, San Antonio, Tex. (Jan. '53) *MR*
- Benham, David B.**, Owner & Chief Engr., Benham Eng. Co., 550 American National Bldg., Oklahoma City, Okla. (Jan. '53)
- Bennett, Carl M.**, 1220 E. Bijou, Colorado Springs, Colo. (Apr. '49)
- Benz, George R.**; see Phillips Petroleum Co.
- Berens, Leroy R.**, Filterman, Denver Board of Water Comrs., Denver, Colo. (Apr. '53) *P*
- Berger, Arthur William**, Asst. Public Works Officer, Naval Station, Roosevelt Roads, Puerto Rico (Oct. '52)
- Berger, John C., Jr.**, Civ. Engr., City Engineer's Office, Cedar Rapids, Iowa (Jan. '53) *M*
- Berry, Don C.**; see Breckenridge (Tex.) Water & Sewage Dept.
- Bert, Eldon F.**, Asst. Mgr., Mogle Bros., 370 S. Central Ave., Chino, Calif. (Oct. '52)
- Best, James J., Jr.**, Cons. Engr., 410 Gibson Ave., West Memphis, Ark. (Oct. '50)
- Bibb, James W., Jr.**; see Holton (Kan.)
- Bihenn, Joseph A.**, Supt., Public Works & Water Works, City Hall, St. Boniface, Man. (Oct. '42)
- Biggins, William Ray**, Supt., Water Works & Sewerage, 1118 E. Clay St., Collinsville, Ill. (Jan. '53)
- Billings, Harry**; see La Habra (Calif.)
- Binnings, Robert P.**, Field Engr., Fairbanks, Morse & Co., 626 N. 9th St., Birmingham, Ala. (July '53) *P*
- Bivens, Douglas**, Supt., City Water Dept., Waldron, Ark. (Apr. '53)
- Black, William Mock**, Sales Engr., Armco Drainage and Metal Products, Inc., Box 1068, Raleigh, N.C. (Jan. '53) *R*
- Blackford, Charles E.**, Sales Repr., U.S. Pipe & Foundry Co., 122 S. Michigan Ave., Chicago 3, Ill. (Jan. '53)
- Blackhurst, A. O.**, Cons. Chemist, Daymond Co., Ltd., 675 Richmond St., Chatham, Ont. (Apr. '53)
- Blackstone, Glen B.**, Chief Engr., Waterite Co., Box 1770, Benson Station, Omaha 4, Neb. (Jan. '53) *P*
- Blackwell, Leon H.**, Supt., Water & Streets, Valley Center, Kan. (Jan. '53) *M*
- Blanchard, Giles**, Asst. Supt., Filtration Plant, Water Works Dept., 1040 Bourdages Ave., St. Hyacinthes, Que. (Jan. '53)
- Bletsch, John L.**, Supt., Harris County Fresh Water Supply Dist. No. 8, Box 3835, Baytown, Tex. (Apr. '53) *M*
- Bliss, Roy E.**, Owner-Operator, Culligan Soft Water Service, 601 Park Ave., Worland, Wyo. (Jan. '53) *MP*
- Blissfield, Village of**, Edgar J. Cannane, Public Works Mgr., 1064 E. Adrian St., Blissfield, Mich. (Corp. M. Jan. '53)
- Boger, W. H., Sr.**; see G. M. Baker & Son, Inc.
- Bogs, George J.**, Sales Repr., U.S. Pipe & Foundry Co., 122 S. Michigan Ave., Chicago 3, Ill. (Jan. '53)
- Bohm, Samuel F.**, Water Plant Supt., 218 N. 1st St., Iola, Kan. (Jan. '53) *M*
- Bolt, Hugh E.**; see Pendleton Mfg. Co.
- Bolton, John R.**, Water Supt., Taft-Nelacott-De Lake Water Dist., Nelscott, Ore. (Jan. '53) *MRP*
- Bond, Floyd**, Supt. of Water Works, Columbus, Kan. (Jan. '53)
- Borden, Olney**, Cons. Engr., 109 Dwyer Ave., Liberty, N.Y. (Jan. '53) *RP*
- Borenstein, Arnold**, Water Treaters of Chicago, 1946 W. Montrose Ave., Chicago 13, Ill. (Oct. '50)
- Borge, Carlos**, School of Public Health, Univ. of North Carolina, Chapel Hill, N.C. (Jr. M. Jan. '53)
- Bornor, Leonard L.**, Asst. City Engr., Eng. Dept., 726 Michigan Ave., East Lansing, Mich. (Jan. '53) *MP*
- Bothwell, Paul Warren**, AF 19446380, 18th Installations Squadron, APO 970, c/o Postmaster, San Francisco, Calif. (Jr. M. Jan. '53)
- Bottom, Harlow A.**, Mgr., Water Dept., York, Neb. (Apr. '53) *MRP*
- Boulahanis, Agestinos James**, Civ. Engr., Dept. of Public Works, 44 W. 113th St., Chicago 28, Ill. (Jan. '53)
- Boyd, James C.**, Director, Public Works, City County Bldg., Wheeling, W. Va. (Jan. '53) *M*
- Bracklin, Horace W.**, Supt., Water Dept., Box 388, Marion, Ark. (Apr. '53) *M*
- Braglio, R. N.**, Field Engr., Munic. Management Co., Box 589, Leechburg, Pa. (Apr. '53)
- Branum, Jack S.**; see Burnet (Tex.)
- Braun, Paul J.**, Public Fire Protection Engr., Washington Surveying & Rating Bureau, Box 1818, Seattle 11, Wash. (Jan. '53) *MRP*
- Breckenridge Water & Sewer Dept.**, Don C. Berry, Mgr., City Hall, Breckenridge, Tex. (Corp. M. Apr. '53) *MRP*
- Breedlove, Duke**, Mgr., Booneville Water Co., Box 56, Booneville, Ark. (Apr. '53)
- Bremser, L. W.**, Civ. Engr., Black & Veatch, 5200 Birch, Mission, Kan. (Apr. '53) *MRP*
- Brewer, Philip Warren**, Civ. & San. Engr., Bureau of Yards & Docks, Rm. 2C12, Washington 25, D.C. (Jan. '53) *P*
- Bridges, Fitz J.**, Civ. Engr., Walter J. Lehner & Sons, 204 Lawyers Bldg., Nte. Clemens, Mich. (Jan. '53) *P*
- Brocker, Louis A.**, Chief Engr., Water Works Dept., Shawnee Dr., Evansville, Ind. (Jan. '53)
- Broggini, John M.**, Mech. Engr., Water Dept., 831 City Hall Annex, Philadelphia, Pa. (Jan. '53) *MRP*
- Brooks, Frank M.**, Pres., Art Concrete Works, 366 S. Fair Oaks Ave., Pasadena 1, Calif. (Oct. '52)
- Browne, Harold R.**, Supt., Comrs. of Public Works, Box 186, McCormick, S.C. (Apr. '53) *MP*
- Bruck, Clyde**, Sales Repr., Badger Meter Mfg. Co., 6655 Kennedy Ave., Cincinnati 13, Ohio (Jan. '53) *MR*
- Bryant, William F.**, Sales Engr., Edificio Abreu 402, Havana, Cuba (Oct. '52)
- Buchner, H. N.**; see West Miami (Fla.) Water Board
- Buck, Chauncey M.**, Manufacturers' Agent, 2254 College Ave., Indianapolis, Ind. (Jan. '53)
- Buck, Jordan C.**, Supt., Sewage Treatment, Texarkana Water & Sewer Systems, 402 Waterman St., Texarkana, Tex. (Jan. '53)
- Bufe, Carl F.**, Supt., Dept. of Munic. Service, 2555 Van Alstyne Blvd., Wyandotte, Mich. (Jan. '53)
- Bugg, Harold D.**, Sales Engr., B-I-F Industries, 226 Douglas Ave., Waukesha, Wis. (Jan. '53) *M*
- Bull, Albert Gordon**, Development Engr., Eastman Kodak Co., Kodak Park, Bldg. 5, Rochester, N.Y. (Jan. '53) *RP*
- Burch, Robert E.**, Asst. Gen. Sales Mgr., Sparling Meter Co., 8107 Mackey St., Overland Park, Kan. (Apr. '53)
- Burdoin, Allen J.**, Project Engr., Metcalf & Eddy, 1300 Statler Bldg., Boston, Mass. (Jan. '53) *MRP*
- Burgess, Frederick J.**, Civ. Engr., State Sanitary Authority, 1400 S.W. Fifth St., Portland 1, Ore. (Apr. '53) *MRP*
- Burkburnett, City of**, O. D. Barnethy, City Hall, Burkburnett, Tex. (Munic. Sv. Sub. Oct. '52)
- Burke, Bryan**, Mgr., Fordyce Water Co., Box 627, Fordyce, Ark. (Apr. '53)
- Burke, Joe P.**; see Sand Springs (Okla.) Munic. Water Board
- Burnet, City of**, Jack S. Branum, City Mgr., Box 477, Burnet, Tex. (Munic. Sv. Sub. Jan. '53)
- Bush, Paul J.**, Asst. Supt., Utilities, 803 N. Washington, Iola, Kan. (Jan. '53) *MP*
- Bush, Richard Williams**, Salesman, Keasbey & Mattison Co., 1520 Esperanza Bldg., Houston, Tex. (Jan. '53)
- Bushnell, Dwight J.**, Sales Repr., Worthington-Gamon Meter Div., 135 Edgar Rd., Webster Groves, Mo. (Jan. '53) *M*
- Bussey, V. G.**; see Weston (Ont.) Public Utilities Com.
- Butcher, Thomas L.**, Supt., Warren Township Water Dept., 7620 E. Nine Mile Rd., Van Dyke, Mich. (Apr. '53) *M*
- Butler, K. C.**; see Marmaduke (Ark.)
- Cahill, Cato G.**, Engr., Metropolitan Water Dist. of Southern California, 306 W. 3rd St., Los Angeles 13, Calif. (Apr. '53) *M*

- Caldwell, City of, C. D. Crandall,** Water Supt., City Hall, Caldwell, Idaho (Munic. Sv. Sub. Oct. '52)
- Calkin, J. R.;** see Woodstock (N.B.)
- Call, Jack,** Gen. Supt., California Water Service Co., 374 W. Santa Clara St., San Jose, Calif. (Jan. '53)
- Calzada, H. M.,** Mgr., Compania Cubana de Electricidad, Monte No. 1, Havana, Cuba (Jan. '53)
- Cambridge Water Dept.,** William H. McGinnis, Gen. Supt., 250 Fresh Pond Pkwy., Cambridge 38, Mass. (Munic. Sv. Sub. Apr. '53)
- Campbell, A. Allan,** Tech. Repr., Associated Chemical Co., 14 Darrell Ave., Toronto, Ont. (Jan. '53) *P*
- Campbell, Lorne A.,** Research Fellow, Dept. of Biochemistry, Ontario Research Foundation, 43 Queen's Park, Toronto 5, Ont. (Jan. '53)
- Campbell, Lyle W.,** Supt. of Works, Orangeville, Ont. (Apr. '53)
- Candido Coutinho, Carlos,** Chief of Labs., Companhia das Aguas de Lisboa, R. do Alveila, 12, Lisbon, Portugal (Jan. '53)
- Cane, Stanley J.,** Engr. & Supt., Public Works, 903 Spar St., Ontonagon, Mich. (Jan. '53) *M*
- Cannane, Edgar J.;** see Blissfield (Mich.)
- Carndall, C. D.;** see Caldwell (Idaho)
- Carney, Robert B.,** Salesman, Asbestos Pipe Dept., Johns-Manville Sales Corp., 524 S. Mitchell St., Arlington Heights, Ill. (Jan. '53)
- Carr, H. K.,** Secy., Indiana Well Drillers Assn., Box B, Greentown, Ind. (Jan. '53) *M*
- Carrera, Manuel S. P.,** Graduate Student, Univ. of Minnesota, Pioneer Hall, Minneapolis, Minn. (Jr. M. Jan. '53)
- Case, Edmund W.,** Water Supt., Water Dept., Newport, Ore. (Jan. '53) *M*
- Cassidy, James H.,** Civ. Engr. Assoc., Dept. of Water & Power, Box 3669 Terminal Annex, Los Angeles 54, Calif. (July '36) *M*
- Cavitt, Clifford H., Sr.,** Supt., Water & Sewers, Aransas Pass, Tex. (Jan. '53)
- Cedar Grove, Township of, Harry Farro,** Water Supt., Municipal Bldg., Cedar Grove, N.J. (Corp. M. July '49)
- Cefalu, Joseph,** Supt., Munic. Light & Elec. Plant, Morgan City, La. (Apr. '53) *M*
- Chagnon, Jacques;** see St. Laurent (Que.)
- Chambers, Howard H.,** Supt., Filter Plant, Route 4, Rock Hill, S.C. (Jan. '53)
- Chapman, C. W.,** Supt., Mill Tech Dept., Union Bag & Paper Corp., Box 570, Savannah, Ga. (Jan. '53) *P*
- Chapman, Norman S.,** Chemist, Water Dept., City Hall, Hagerstown, Md. (Oct. '52)
- Chastain, A. O.,** Mgr., Munic. Water Works, Box 188, Wynne, Ark. (Apr. '53)
- Chatham, Town of, J. J. Duffy,** Town Clerk, Chatham, N.B. (Corp. M. Jan. '53)
- Chavenelle, Gilbert D.,** Staff Engr., Michigan Munic. League, 205 S. State St., Ann Arbor, Mich. (Apr. '53)
- Chemical Fire & Rust Proofing Corp.,** Kurt A. Gruber, Secy., 11-33-31st Dr., Long Island City 6, N.Y. (Affil. Oct. '49)
- Cheney, M. B.,** Treas., Mockingbird Water Co., Route 2, Box 460, Scottsdale, Ariz. (Oct. '52)
- Child, Carroll J.,** San. Engr., Strategic Air Command, Offutt Air Force Base, Omaha, Neb. (Jan. '53) *MRP*
- Christine, Ernest,** Supt. of Purif., Bureau of Water, 13th & Lawrence, Allentown, Pa. (Apr. '53) *P*
- Chrysler, Kenneth L.;** see Great Falls (Mont.) Water Dept.
- Cisneros, Salvador;** see Comision Federal de Electricidad, Mexico
- Clark, St. Clair,** Chief Engr., Sherman Machine & Iron Works, 26 E. Main St., Oklahoma City, Okla. (Apr. '53) *MRP*
- Cleaver, Walter,** Supt., Water Works, Brookville, Ind. (July '53) *MP*
- Clewell, Dayton H.,** Director of Research, Field Research Labs., Magnolia Petroleum Co., Box 900, Dallas 1, Tex. (Jan. '53) *P*
- Cline, Herbert C.,** Supt., Water Dept., Williamstown, W.Va. (Apr. '53) *M*
- Coalson, Earl C.,** Supt., Water & Sewer Dept., Utilities Board, Bristol, Va. (Oct. '52)
- Coates, Francis M.,** Treas., Munic. Authority of the Borough of West View, Wellington Dr., West View, Pittsburgh 29, Pa. (July '53) *M*
- Coblentz, Ralph W.,** Mgr., Lakewood Water Dist., 11900 Gravelly Lake Dr., S.W., Tacoma 9, Wash. (Jan. '53) *M*
- Coffey, Thomas J.;** see Albion (N.Y.)
- Coggins, H. C.;** see Louisville (Miss.) Water System
- Colburn, Ray S.,** Special Repr., Water Works & Industrial Supply Co., Box 1985, Huntington, W.Va. (Jan. '53)
- Cole, John S.,** Chief Operator, Filtration Plant, Fremont, Ohio (Jan. '53) *P*
- Collins, Burt W.,** Chief Chemist, International Paper Co., Bastrop Mills, Bastrop, La. (Apr. '53) *P*
- Colsten, William,** Chief Filter Plant Operator, Water Dept., City Hall, Kingson, N.Y. (Jan. '53) *P*
- Columbia Cellulose Co., Ltd.,** D. J. Rowse, Water Plant Supervisor, Box 1000, Prince Rupert, B.C. (Corp. M. Apr. '53)
- Comision Federal de Electricidad, Salvador Cisneros,** Engr. & Chief, Lab. Dept., Rodano No. 14, Mexico 5, D.F., Mexico (Corp. M. Jan. '53)
- Conley, H. R.;** see Lockport (N.Y.) Com. of Public Works
- Conron, William M.,** Vice-Pres. & Secy., Stamford Water Co., 103 Summer St., Stamford, Conn. (Jan. '53) *M*
- Cook, John J.,** Supt. of Distr., Water Works, City Hall, Columbus, Ohio (Apr. '53)
- Cook, Norman,** Watershed Supervisor, North Jersey Dist. Water Supply Com., Wanaque, N.J. (Jan. '53)
- Cooper, Donald K.,** Field Engr., Inflico, Inc., 717 Beech Ave., Charleston 2, W.Va. (Apr. '53) *MP*
- Cooper, Frank E.;** see Tesco Chemicals, Inc.
- Cooper, Ralph L.,** Mgr., Eng. Sales Dept., Interstate Machinery & Supply Co., 10th & Douglas, Omaha, Neb. (Apr. '53) *P*
- Corley, Earl W.,** Supt., Harris County Water Control & Improvement Dist. No. 36, 14403 Market St., Houston, Tex. (Apr. '53)
- Cote, Daniel Narcisse,** Graduate Student in San. Eng., North Carolina State College, 218 Hillcrest Rd., Raleigh, N.C. (Jr. M. Oct. '52)
- Cottrell, Vere V.,** Supt., Water, Sewer & Elec. Utilities, 5 N. Center St., Versailles, Ohio (Jan. '53) *MP*
- Coughlin, Donald W.,** Pres. San Bernardino Water Utilities Corp., 3170 State St., San Bernardino, Calif. (Jan. '53)
- Coventry, W. A.,** Div. Sales Mgr., Mueller Co., 2301 Chestnut St., Chattanooga 1, Tenn. (Jan. '53)
- Cox, Joe E.,** Supt. of Distr., City Hall, Gainesville, Fla. (Jan. '53) *M*
- Cox, W. J.;** see Paoli (Ind.)
- Crane, D. Elrow,** Supt., Dept. of Utilities, Fulton, Mo. (Oct. '43) *M*
- Crawford, Warren D.,** Sales Repr., Mueller Co., Box 8188, Houston 4, Tex. (July '53) *MRP*
- Crawford, Wyatt B.,** Supt., Munic. Light & Water Works, Benton, Ark. (Apr. '53) *MRP*
- Cremata, Vincent Y.,** Supt. of Area 1, Florida Keys Aqueduct Com., Box 545, Key West, Fla. (Jan. '53) *M*
- Crowe, Samuel H., Jr.,** Chemist, Pittsburgh Plate Glass Co., Works No. 9, Crystal City, Mo. (Jan. '53) *P*
- Cundall, Kenneth N.,** Mgr., Laykold Sales, American Bitumuls & Asphalt Co., 200 Bush St., San Francisco 4, Calif. (Apr. '53) *M*
- Curry, Willford G.,** Asst. San. Engr., State Dept. of Health, 2180 Milvia St., Berkeley, Calif. (Oct. '52)
- Curtis, Thomas J.,** Engr., Russell Construction Co., 504 Harbour Commission Bldg., Toronto, Ont. (Apr. '53)
- D'Alessio, Sabato P.,** Owner, Garden State Artesian Well & Pump Co., 291 Oliver St., Newark 5, N.J. (Jan. '53)
- Davis, Forrest C.,** Water Supt., Slaton, Tex. (Jan. '53)
- Davis, N. E.,** Dist. San. Engr., State Health Dept., 831 Topeka Blvd., San Antonio, Tex. (Apr. '53)

- Davis, Wayne**, Supt., Water Works, Malvern, Ark. (Jan. '53) *MP*
- Dawkins, Mather E.**, San. Engr., Headquarters Technical Training Air Force, Gulfport, Miss. (Jan. '53) *M*
- Day, Carter R.**, Supt., Munic. Water Works, Nashville, Ark. (Apr. '53)
- Day, Dewayne D.**, Supt., Water Dept., Meadville, Pa. (Jan. '53) *M*
- Dean, Ralph R.**, Chemist, Worth Chemical Products Co., Box 366, Fort Worth, Tex. (Jan. '53) *P*
- DeBlais, Roland**, Ground Water Engr., Quebec Dept. of Mines, 35 d'Auteuil St., Quebec City, Que. (Jan. '53)
- Decarl, Alex**, Chief Engr., Pressure Pipe Co. of Canada, Ltd., 6905 Claranald Ave., Montreal, Que. (Jan. '53)
- DeCory, Lance C.**, San. Engr., City of Enid, Convention Hall, Enid, Okla. (Jan. '53)
- Deem, Richard R.**, Asst. Operating Chemist, Monsanto Chemical Co., Miamisburg, Ohio (Jan. '53) *MP*
- de la Guardia, Mario**, Cons. Engr., Cia. Thomas F. Turull, Muralla 60, Havana, Cuba (Jan. '53)
- DeLaune, Lawrence J.**, Northern Regional Engr., State Board of Health, New Orleans, La. (Oct. '52)
- Dellisle, J. L.**, Civ. Engr., Delisle & Laquerre, 365 Racine St., Chicoutimi, Que. (Jan. '53) *MP*
- Demarest, Arthur L.**, Village Engr., Village Hall, South Orange, N.J. (Jan. '53)
- Denney, Woodrow**; see Truckee Water Co., Inc.
- DeQueen Munic. Water & Sewage Works**, Carl Hubbard, Office Mgr., DeQueen, Ark. (Corp. M. Jan. '53)
- Detting, Curtis T.**, Owner, East Worcester Water Co., East Worcester, N.Y. (Jan. '53)
- DeWitt, Frederick A.**; see Michigan Hydrant & Valve Mfg. Co.
- Dexter, William Albert**, Director, Div. of San. Eng., Dept. of Public Health, Administration Bldg. 2, Edmonton, Alta. (Jan. '53) *MRP*
- Dey, Charles L.**, Mgr., Hot Applied Coatings, Pittsburgh Dist. Sales, 405 Chamber of Commerce Bldg., 7th Ave., Pittsburgh 19, Pa. (Jan. '53) *RP*
- Dhooche, John A.**; see Shawnee Township (Kan.) Water Dept.
- Dill, H. G.**, Cons. Engr., 26074 N. High St., Columbus, Ohio (Apr. '53) *RP*
- Dion, Clarence K.**, Supt. & Engr., Water Dept., Westerly, R.I. (Jan. '53) *M*
- Dirkse, Richard P.**, Supt., Millwood Water Dept., 123 Exchange Pl., Kalamazoo, Mich. (Oct. '52)
- Dobbin, T. H.**; see Sarnia (Ont.) Civic Water Works Dept.
- Doganiero, Charles J.**, Chief Clerk, City Water Bureau, 409 City Hall, Camden, N.J. (Jan. '53) *M*
- Donis, R. O.**, Maint. & Constr. Foreman, Portland Water Bureau, 1900 N. Interstate Ave., Portland, Ore. (Apr. '53) *MRP*
- Donnelly, Robert D.**, Director, San. Eng. Div., Dept. of Health & Welfare, Box 404, Charlotte-town, P.E.I. (Jan. '53) *RP*
- Doty, R. T.**, Doty Bros., 9936 E. Ramona St., Bellflower, Calif. (Oct. '52)
- Dougherty, E. R.**, Supt. of Sewers & Sewage Treatment, 409 N. Missouri St., Mexico, Mo. (Jan. '43)
- Douglas, W. M.**, Pres., Board of Supervision, Fresh Water Dist. No. 8, Harris County, Tex. (July '53) *M*
- Downing, Oscar H.**, Supt., Water Works, 1212 Woodlawn Terrace, Clearwater, Fla. (Apr. '53) *MRP*
- Downs, Fred C.**, San. Engr., U.S. Navy, Box 145, R.F.D. 2, Sewell, N.J. (Jan. '53)
- Drumwright, Henry E.**, Chief, Public Health Inspection, City Health Dept., 2013 Commerce, Dallas, Tex. (Jan. '53) *MRP*
- Duffy, J. J.**; see Chatham (N.B.)
- Dunn, Leonard N.**, Gen. Supt., Danco Construction Co., Box 348, North Little Rock, Ark. (Jan. '53) *RP*
- du Pont, E. L. de Nemours & Co., Inc.**, W. B. Guthrie, Power House Supervisor, Martinsville, Va. (Corp. M. Jan. '53)
- DuPuis, Clarence E.**, Supt., Water Supply System, Bridgeport, Mich. (Apr. '53) *MR*
- Eaken, R. O.**; see Lodi (Ohio) Board of Public Affairs
- Earl, William H.**, Supt., Water Dist., Box 190, Woodstock, Ill. (Apr. '53) *M*
- East Aurora, Village of**, Edward J. Maurer, Village Engr., 571 Main St., East Aurora, N.Y. (Munic. Sv. Sub. Jan. '53)
- Eastman, Paul W., Jr.**, Sr. Asst. San. Engr., U.S. Public Health Service, Region VII, 2200 Federal Office Bldg., Kansas City 6, Mo. (Jan. '53) *MRP*
- Edgerley, Edward, Jr.**, Teaching Asst., Massachusetts Inst. of Technology, 1-153 MIT, Cambridge 39, Mass. (Jr. M. Jan. '53)
- Edmonton Power, Water Supply & Purification Plant**, E. L. Smith, Chem. Engr., Edmonton, Alta. (Corp. M. July '53)
- Edwards, Carman H.**, Supervising Wastes Engr., New York & Pennsylvania Co., Inc., Lock Haven, Pa. (Oct. '52)
- Eggert, Bruce**; see Raritan Township (N.J.) Water Dept.
- Elders, Harlan**; see Astell (Kan.)
- Eldridge, T. Matthew**, Operating Supt., Philadelphia Utilities, Philadelphia, Miss. (Apr. '53) *MP*
- Ellis, Watson**, Assoc. Engr., Clyde C. Kennedy Eng. Office, 604 Mission St., San Francisco 5, Calif. (Jan. '53) *P*
- Elsea, Edgar E.**, Supt., Pittsburgh Pipe Cleaner Co., 259 N. 51st St., Birmingham, Ala. (July '49)
- Elwood Munic. Water Works**, Harry B. Overesch, Supt. of Utilities, 1604 Main St., Elwood, Ind. (Corp. M. Apr. '44)
- Elyria, City of**, D. W. Kothe, Safety-Service Director, City Hall, Elyria, Ohio (Munic. Sv. Sub. Jan. '53)
- Emellity, Ludgard A.**, Asst. San. Engr., L. I. Couch Co., Inc., 230 E. Ohio St., Indianapolis, Ind. (Apr. '53) *RP*
- Emmanuel, Francois**, Pres.-Gen. Mgr., S. N. Marep, 42 Rue La Boetie, Paris 8, France (Oct. '47)
- Emporia, City of**, Walter F. Johnson, City Mgr., Civic Auditorium, 103 E. 6th St., Emporia, Kan. (Corp. M. Apr. '53)
- Empresas Publicas Municipales**, Samuel L. Holloper, Barranquilla, Colombia (Corp. M. Oct. '52)
- Ennis, City of**, R. F. Floyd, Water Dept., Box 375, Ennis, Tex. (Munic. Sv. Sub. Jan. '53)
- Eschenbrenner, H. E.**; see Universal Concrete Pipe Co.
- Evans, E. O.**, Pres. & Gen. Mgr., DePoe Bay Development Co., Box A, DePoe, Ore. (Apr. '53) *MRP*
- Evans, Martin E.**, Supt., Water & Sewers, Lonoke, Ark. (July '50) *M*
- Exum, Webster L.**, Supt., Munic. Water Plant, Box 48, Chetopa, Kan. (Apr. '53) *P*
- F & H Supply Co.**, R. W. Henley, Box 644, Pensacola, Fla. (Assoc. M. Oct. '52)
- Fairlie, John W.**, Professional Engr., 225 Gilmont St., Ottawa, Ont. (Jan. '53)
- Falkenthal, Ralph F.**, Prin. Filtration Chemist, South Dist. Filtration Plant, 3300 E. Cheltenham Pl., Chicago 49, Ill. (Jan. '53)
- Farabough, T. E.**, Supt., Water Plant, Dumas, Ark. (Apr. '53)
- Farlow, Joseph N.**, Cons. Engr., 1110 Raleigh Bldg., Raleigh, N.C. (Oct. '52)
- Farmland Water Works**, Rolland G. Hiatt, Supt., Farmland, Ind. (Corp. M. Jan. '53)
- Farrow, Harry**; see Cedar Grove (N.J.)
- Feinberg, Julius R.**, Engr., Ingersoll Corp., El Dorado, Ark. (Jan. '53) *R*
- Fenstad, Edmund C.**, Sales Repr., Mueller Co., 58A Manor Pkwy., Rochester 20, N.Y. (July '53)
- Ferris, Spencer G.**, Acting Supt., Munic. Water & Light Div., 1101 Monroe Ave., N.W., Grand Rapids, Mich. (Jan. '53) *M*
- Fick, Henry H.**, Weber, Fick & Wilson, 1529 N. 2nd St., Harrisburg, Pa. (July '53) *M*
- Fielding, Hugh R.**, San. Engr., Ontario Dept. of Health, 807 Richmond St. W., Toronto, Ont. (Apr. '53)
- Filtration Equipment Corp.**, R. E. Herbert, Pres., 271 Hollenbeck St., Rochester 21, N.Y. (Assoc. M. Jan. '53)
- Fink, Carl L.**, Mech. Engr., Water Dept., 830 City Hall Annex, Philadelphia, Pa. (Jan. '53) *M*

- Fisher, George J.**, Asst. Director of Service, City of Wichita, 205 City Bldg., Wichita 2, Kan. (Jan. '53) *M*
- Fisher, Theodore G.**, Asst. Water Supt., Tillamook Water Com., City Hall, Tillamook, Ore. (Apr. '53) *M*
- Fitzmaurice, Patricio**, Mgr., Abastecimiento de Aguas, Apdo. 294, San Luis Potosi, S.L.P., Mexico (Jan. '44) *MP*
- Fleming, Samuel W., III**, Valuation Engr., Gannett, Fleming, Corddry & Carpenter, Inc., 600 N. 2nd St., Harrisburg, Pa. (Apr. '53) *M*
- Flick Painting Co.**, W. T. Flickinger, Owner, Garrison, Iowa (Assoc. M. Jan. '53)
- Flickinger, W. T.**; see Flick Painting Co.
- Florence, Harold V.**, Supt., Dept. of Water Supply, 38 Oak St., Ridgewood, N.Y. (Jan. '53) *M*
- Flores, Frank H.**, Dist. Mgr., Layne Western Co., Box 662, Ames, Iowa (Apr. '53) *P*
- Florida Public Utilities Co.**, J. K. Roberts, Vice-Pres., 338 Datura St., West Palm Beach, Fla. (Corp. M. July '53)
- Floyd, R. F.**; see Ennis (Tex.)
- Foerster, Richard E.**, Asst. Engr., Greeley & Hansen, 220 S. State St., Chicago 4, Ill. (Jan. '53) *RP*
- Ford, Dudley**, Water Dept., 2121 Westwood, Oklahoma City, Okla. (Jan. '53)
- Ford, James L.**, Draftsman, Water Dept., Municipal Bldg., Oklahoma City, Okla. (Apr. '53) *M*
- Ford, John Laurence, Jr.**, Sales Repr., Ford Meter Box Co., Inc., 8514 Beauregard Dr., Dallas 5, Tex. (Jan. '53)
- Forest City, Town of**, Thomas Petty, Supt., Munic. Water Works, Forest City, N.C. (Corp. M. Apr. '53)
- Forsgren, Arthur R.**, Gen. Contractor, Forsgren Brothers, Box 368, Fort Smith, Ark. (Apr. '53)
- Foxboro Co., The**, Russell H. Babcock, Asst. Mgr., Utilities Industrial Div., Neponset Ave., Foxboro, Mass. (Assoc. M. Oct. '52)
- Francescon, P. K.**, Partner, Zimmer & Francescon, Box 192, Moline, Ill. (Jan. '53) *RP*
- Fraser Cement Products Co.**, Arnold P. Weible, 3020 Andrita St., Los Angeles, Calif. (Assoc. M. Jan. '53)
- Frederick, Donald F.**, Salesman, Rensselaer Valve Co., 1960 Watt St., Schenectady 10, N.Y. (Apr. '53)
- Frederickson, A. Anton**, Pres., Northern Utility Co., 7045 N. 12th St., Phoenix, Ariz. (Apr. '53) *MP*
- Freeman, Jesse L.**, Chief Operator, Filtration Plant & Water Utility, City Hall, West Frankfort, Ill. (Apr. '53) *P*
- Freibel, Werner A.**, City Engr., City Hall, Saskatoon, Sask. (Jan. '53) *MP*
- French, Daniel M.**, Partner, Duval Drilling Co., Box 6057, Jacksonville 5, Fla. (Apr. '53) *R*
- Frerichs, Arthur H.**; see Island Lake Water Co.
- Frey, Arthur J.**, Vice-Pres. & Mgr., Water Softening Service, Inc., 1313 Reynolds Ave., Middle-town, Ohio (Jan. '53)
- Frieday, W. F.**, Supt., Water Works, Arnprior, Ont. (Jan. '53)
- Froill, William S.**, Dist. Sales Engr., Byron Jackson Co., 314 Lloyd Bldg., Seattle, Wash. (Jan. '53)
- G & M Duct Cleaning & Rust Proofing Corp.**, Anthony Gandolfo, Rm. 905, 103 E. 125th St., New York 35, N.Y. (Assoc. M. Jan. '53)
- Gabe, Robert S.**, Engr., City Hall, Vicksburg, Miss. (Oct. '52)
- Galligan, William E.**, Assoc. Prof., Iowa State College, 3218 Oakland St., Ames, Iowa (Apr. '53)
- Gandolfo, Anthony**; see G & M Duct Cleaning & Rust Proofing Corp.
- Garcia Cano, Mario**, Water Treatment Engr., Productos Dearborn de Mexico, Plaza de Buenavista 2-406, Mexico 3, D.F., Mexico (Oct. '52)
- Garratt, Mansfield W., Jr.**, Water Consultant, California Filter Co., 156 Spear St., San Francisco 5, Calif. (Jan. '53) *P*
- Garrett, Conncill Dozier**, Sales Mgr., W. P. Oberndorfer & Son, 302 Dean Bldg., 201 E. Plume St., Norfolk, Va. (Oct. '52)
- Gas City Water Dept.**, Theodore Stichter, Utilities Engr., 211 E. Maine St., Gas City, Ind. (Corp. M. Jan. '53)
- Gassmann, Otto G.**, Supervisor of Operations, St. Louis County Water Co., 6600 Delmar Blvd., University City 5, Mo. (Apr. '53) *M*
- Geneva, Town of**, Wayne Nelson, Water Supt., Geneva, Ind. (Corp. M. Jan. '53)
- Geurin, James W.**, Chemist, U.S. Geological Survey, Inst. of Science & Technology, Univ. of Arkansas, Fayetteville, Ark. (Jan. '53) *R*
- Geyer, George S.**, Operator, Fox Chapel Water Authority, 621 Cheswood Manor, Cheswick, Pa. (July '53) *P*
- Gibbs, L. C.**, City Engr., Chehalis, Wash. (Apr. '53)
- Giffin, Louis M.**, Supt., Munic. Water Works, Monangab, W.Va. (Jan. '53) *MP*
- Gilman, Joseph P.**, Supt., Water & Sewer Dept., Borough of Bellmawr, 300 Carter Ave., Bellmawr, Gloucester City P.O., N.J. (Jan. '53) *MP*
- Giltner, A. H.**, Supt., Munic. Utilities, Flora, Ind. (Apr. '53)
- Gilem, Clarence E.**, Supt. & Engr., The Pottsville Water Co., 221 S. Center St., Pottsville, Pa. (Jan. '53) *MP*
- Godwin, James M.**, Development Engr., Ozark-Mahoning Co., Box 449, Tulsa, Okla. (Jan. '53)
- Goebel, Elmer**, Asst. Supt., Water Dept., Distr. Div., 29th & Cambria Sts., Philadelphia, Pa. (Apr. '53) *M*
- Goldley, Charles Lambert**, Chemist, Elizabethtown Water Co. Consolidated, 22 W. Jersey St., Elizabeth 4, N.J. (July '53) *P*
- Gonce, Francis R.**, Supt., Water & Sewer Dept., 1011 College St., Bowling Green, Ky. (Jan. '53)
- Gonzalez, Gerardo H.**, Second Chief Engr., Guanabacoa Aqueduct, Havana, Cuba (Jan. '53) *M*
- Gorline, A. W. J.**, Chem. Engr., St. Louis County Water Co., 6600 Delmar, St. Louis 3, Mo. (Apr. '53) *MP*
- Gorr, Edwin W.**, Box 223, Petersburg, Mich. (Jan. '53)
- Gould, George T.**, Partner, Collins & Gould, 226 E. 4th St., Tulsa, Okla. (Jan. '53)
- Graber, Eugene P.**, Repr., Mueller Co., 1196 Steel Rd., Havertown, Pa. (Apr. '53)
- Grand Island, Town Board of**, Kenneth G. Winters, Grand Island, N.Y. (Munic. Sv. Sub. Apr. '53)
- Granite Falls, Town of**, G. F. Marshall, Supt., Public Works, Granite Falls, N.C. (Corp. M. Jan. '53)
- Grannan, Philip**, Supt., Dept. of Public Works, 170 Cedar St., Corning, N.Y. (Jan. '53) *M*
- Gray, A. V.**, Supt., Western Heights Water Co., Route 2, Box 642, Yucapca, Calif. (Jan. '53)
- Gray, C. L.**, Supt., Water Dept., Route 2, Heber Springs, Ark. (Apr. '53) *P*
- Gray, M. J., Owner**, Gray Artesian Well Co., 314 S. Alcaniz St., Pensacola, Fla. (Jan. '53)
- Great Falls City Water Dept.**, Kenneth L. Chrysler, City Engr., Civic Center, Great Falls, Mont. (Corp. M. Apr. '53)
- Green, P. W.**, Mgr., Lead Belt Water Co., 102 E. School St., Boone Terre, Mo. (Apr. '53) *M*
- Greene, P. W.**, Walker & Assoc., 46 Ferguson Ave., S., Hamilton, Ont. (Jan. '48)
- Greenville, City of**, Scott Wright, Comr. of Utilities, Box 1049, Greenville, Tex. (Munic. Sv. Sub. Jan. '53)
- Greenwade, B. P.**, City Engr., 317 N. Rober, Benham, Tex. (Jan. '53) *M*
- Grimes, Ben L.**, Supervisor, Water Treatment, Water Dept., 2125 Commerce St., Dallas, Tex. (Oct. '52)
- Grosboll, Lorin E.**, Sales Repr., Mueller Co., 2112 Dartmouth Pl., Charlotte, N.C. (July '48)
- Gruber, Kurt A.**; see Chemical Fire & Rust Proofing Corp.
- Guest, Guy O.**; see Noland Co., Inc.
- Gulfport, City of**, Arthur J. Horan, Chairman of Public Works, 5314-24th Ave., S., Gulfport 7, Fla. (Munic. Sv. Sub. Jan. '53)
- Gulledge, Joe Ratcliff**, Supt., Water Works, Chesterfield, S.C. (Jan. '53) *MP*
- Guiley, William F.**, Dist. Mgr., Rockwell Mfg. Co., 119 W. Denny Way, Seattle 99, Wash. (Apr. '53)
- Gurney, Boyd**, Partner, Bert. Gurney & Assoc., 11124 Farnam St., Omaha 8, Neb. (July '53) *P*

- Gustafson, George Victor**, Div. Engr., Morris Knowles, Inc., 1312 Park Bldg., Pittsburgh, Pa. (July '53) *MP*
- Gustafson, Robert C.**, Asst. Supt., Water Softening Plant, 919 Sunset Rd., Ann Arbor, Mich. (Jan. '53) *P*
- Guthrie, W. B.**; see E. I. du Pont de Nemours & Co., Inc.
- Gutz, Carroll Henry**, Owner & Mgr., Culligan Soft Water Service Co., Box 2113, Casper, Wyo. (Oct. '52)
- Guy, Paris L.**; see Aurora (Colo.) Water Dept.
- Hageman, T.**, Exec. Secy., Kenton County Water Com. Dist. No. 1, 31 E. 7th St., Covington, Ky. (Jan. '53)
- Hale, John S.**, Cons. Engr., Box 961, Staunton, Va. (Oct. '52)
- Haley, Francis O.**, Field Engr., Fairbanks-Morse & Co., 643 Lexington Ave., Jackson, Miss. (Oct. '52)
- Halla, Louis G.**, San. Engr., Wallace & Tiernan Co., Inc., 1229 W. Washington Blvd., Chicago, Ill. (Jan. '53) *P*
- Hamlin, City of**, W. G. Rountree, Water Supt., Box 176, Hamlin, Tex. (Corp. M. July '53)
- Hammar, George S.**, Supt. of Water, Stambaugh, Mich. (Oct. '52)
- Hammerstrom, Nell W.**, Eastern Sales Mgr., Glamorgan Pipe & Foundry Co., Lynchburg, Va. (Jan. '53)
- Hammond, James W.**, San. Engr., Humble Oil & Refining Co., Box 2180, Houston Tex. (Jan. '53) *P*
- Hancken, W. C.**; see Manchester (Ga.)
- Hancock, Edwin**, Pres., Cons. Engr., Edwin Hancock Eng. Co., 1509 Jackson Blvd., Chicago 7, Ill. (Jan. '53)
- Haneman, A., Jr.**, Dist. Engr., State Dept. of Health, Box 1495, Lubbock, Tex. (Jan. '53) *MRP*
- Hanna, Edward T.**, Sales Repr., Mathieson Chemical Corp., Mathieson Bldg., Baltimore 3, Md. (Apr. '53)
- Hansen, Frank Omar**, Konsulent, Norsk Landbruks teknisk Forening, Trasopt 1 (III/D), Oslo, Norway (Oct. '52)
- Hansen, Ralph M.**, Cons. Engr., 1517 Fulford St., Kalamazoo, Mich. (Jan. '53)
- Hanson, Leonard R.**, Director, New Business & Statistics, Dept. of Water & Power, 207 S. Broadway, Los Angeles 12, Calif. (Jan. '53) *M*
- Hardgrove, Walter S.**, Acting City Engr., 208-1st Ave., Oakdale, Calif. (Jan. '53) *R*
- Harding, Harold F.**, Fire Marshall, Headquarters Sixth Naval Dist., Naval Shipyard, Naval Base, Charleston, S.C. (Jan. '53) *MR*
- Harris, Robert H.**, Sales Repr., Traverse City Iron Works, Traverse City, Mich. (Jan. '53)
- Harris, Walter A.**, Tech. Repr., B-I-F Industries of Canada, 10285 D'Auteuil Ave., Ahuntsic, Montreal, Que. (Apr. '48) *P*
- Harris County Water Control & Improvement Dist. No. 20**, B. F. Scroog Jr., Mgr.-Supt., 4020 Banner Dr., Houston 15, Tex. (Corp. M. Apr. '53)
- Harrison, George B.**, Supt., Water Dept., City Hall, Seward, Neb. (Apr. '53) *M*
- Hart, Charles G.**, H. D. Fowler Co., Inc., Box 261, Portland 7, Ore. (Oct. '52)
- Hartford City Water Works**, Frank Leffingwell, Supt., Hartford City, Ind. (Corp. M. Jan. '53)
- Hartline, Waldo**, Arnold, Rosch & Hartline, 145 Fair Ave., N. E., New Philadelphia, Ohio (Apr. '53) *MP*
- Harvel, Otis E., Jr.**, Supt., Howard Lee Cromer, 270 N.E. 16th St., Delray Beach, Fla. (Jan. '53) *MRP*
- Harvey, J. R.**, Dist. Engr., State Dept. of Health, 916 Diamond, Meadville, Pa. (July '53) *P*
- Harwood, Raymond M.**, Purif. Supervisor, Water Plant, City Hall, Flint, Mich. (Apr. '53) *MP*
- Hatfield, Raymond C.**, Process Engr., Cities Service Butadiene Plant, Lake Charles, La. (July '53) *P*
- Hathaway, Paul**; see North Manchester (Ind.) Water Works
- Hauenstein, H. P.**; see New Ulm (Minn.) Public Utilities Com.
- Haughton, Herbert S.**, Supt., Borrego Springs Water Co., Box 117, Borrego Springs, Calif. (Apr. '53) *MRP*
- Hauserman, William R.**, Civ. Engr., Shaffer, Parrett & Assoc., 137 Lexington Ave., Mansfield, Ohio (July '53) *P*
- Hayes, Aubrey**; see Salem (Ohio) Water Com.
- Hays, Clyde C.**, Owner, Hays Filter Co., Box 768, 205 Elm St., Waco, Tex. (Jan. '53) *P*
- Heaton, Hubert C.**; see Linton (Ind.) Munic. Water Co.
- Hecht, E. W.**, Sales Engr., Davis Meter Repair & Supply Co., 918 Arlington Ave., Orlando, Fla. (July '49)
- Heckard, Calvin W.**, Engr., Coos Bay-North Bend Water Board, 264 N. Broadway, Coos Bay, Ore. (Apr. '53) *MRP*
- Hecker, Carl R.**, Pipe Protection Service, Inc., 10 Center St., Elizabeth 4, N.J. (Jan. '53) *M*
- Hellmuth, Stephen T.**, Culligan Soft Water Service, 1440 Morse St., Jacksonville 7, Fla. (July '53)
- Helm, Ralph B.**, Lawyer, K. K. Wright, 215 W. 7th St., Los Angeles 14, Calif. (Jan. '53) *M*
- Helton, Glenn W.**, Pres., Benton County Water Co., Inc., Box 96, Gravette, Ark. (Apr. '48)
- Hendrickson, D. C.**, Assoc. Engr., Elec. & Water Eng. Dept., 34 S. Laura St., Jacksonville 2, Fla. (Jan. '53)
- Henley, E. W.**; see F & H Supply Co.
- Henninger, H. H.**, Local Mgr., Pacific Power & Light Co., 904 E. 3rd St., Prineville, Ore. (Apr. '53) *MRP*
- Henrico, County of**, E. A. Beck, County Mgr., Court House, 22nd & Main Sts., Richmond, Va. (Munic. Sv. Sub. Oct. '52)
- Herbert, R. E.**; see Filtration Equipment Corp.
- Heyworth, James Frederick**, Asst. Mgr., Commonwealth Water Co., 11 Beechwood Rd., Summit, N.J. (Jan. '53) *M*
- Hiatt, Rolland G.**; see Farmland (Ind.) Water Works
- Hickman, James E.**, Safety Engr., Dept. of Water & Power, Box 3669 Terminal Annex, Los Angeles 54, Calif. (Apr. '53)
- Hilge, Ernest C.**, Supt., Water Works, Town Hall, Milford, Ohio (Jan. '53)
- Hillsdale Board of Public Works**, James Taylor, Supt. of Distr., City Hall, Hillsdale, Mich. (Munic. Sv. Sub. Jan. '53)
- Hinds, V. A.**, Plant Supt., Water Dept., 110-1st Ave. S., Clear Lake, Iowa (Apr. '53) *MP*
- Hodges, Paul David**, Student, Horace H. Rackham School of Graduate Studies, Ann Arbor, Mich. (Jr. M. Oct. '52)
- Hodges, William Harold**, Supt., Water & Sewage Treatment, Pine-wood Utility Co., 2952 Little York, Houston, Tex. (Oct. '52)
- Hohener, Conrad, Jr.**, Civ. Eng. Asst., Dept. of Water & Power, 1231-2nd St. Bldg., Los Angeles, Calif. (Jan. '53)
- Holland, H. E.**, Distr. Foreman, City Water Dept., Fredonia, Kan. (Jan. '53)
- Hollopeter, Samuel L.**; see Empresas Publicas Municipales
- Holmes, William R.**, City Engr., City Hall, Lubbock, Tex. (Jan. '53) *MR*
- Holton, City of**, James W. Bibb Jr., City Mgr., City Hall, Holton, Kan. (Corp. M. Jan. '49)
- Hoops, Ray**; see Marshalltown (Iowa) Water Works
- Hoops, Roy E.**; see West Alexandria (Ohio) Board of Public Affairs
- Horan, Arthur J.**; see Gulfport (Fla.)
- Howard, Fred Sidney**, 4535 E. 41st St., Seattle 5, Wash. (Jr. M. Jan. '53) *MP*
- Howson, Joseph T.**; see Westfield (N.Y.)
- Hubbard, Carl**; see DeQueen (Ark.) Munic. Water & Sewage Works
- Hudson, William D.**, Asst. Chief Engr., The Pitometer Co., 50 Church St., New York 7, N.Y. (Jan. '53) *M*
- Hull, Clyde K.**, Water Works Operator, Water Treatment Plant, Box 444, Ormond Beach, Fla. (Jan. '53) *P*
- Hunt, Wilber G., Jr.**, Chemist, Metropolitan Water Dist. of Southern California, Box 458, La Verne, Calif. (Oct. '52)
- Hunter, William H.**, City Engr., Greenville, Tex. (Oct. '52) *MRP*
- Huntington Water Works**, Gordon L. Watson, Supt., Huntington, Ind. (Corp. M. Jan. '53)

- Ireland, Norvel E.**, Louis H. & K. J. Collar Co., 2818 Taurum Ave., Kansas City 2, Kan. (Apr. '51)
- Island Lake Water Co.**, Arthur H. Frerichs, Mgr., 120 S. LaSalle St., Chicago 3, Ill. (Corp. M. Apr. '53)
- James, Harold T.**, 8102 Bonner Dr., Houston, Tex. (Oct. '52)
- James, Ryburn V.**, Supervisor, Water & Waste Dept., Hercules Powder Co., Radford Arsenal, Radford, Va. (Jan. '53) *MP*
- Jardine, James W.**, Comr., Dept. of Water & Sewers, 405 City Hall, Chicago 2, Ill. (Apr. '53)
- Jay, Sam**, Supt., Water Works, Robert Lee, Tex. (Jan. '53) *MR*
- Jessie, I. T.**, Town Mgr., Richlands, Va. (Oct. '52)
- Johnson, Lawrence J.**, Asst. Supt., Water Dept., City Hall, Tillamook, Ore. (Apr. '53) *MRP*
- Johnson, Orion A.**, Supt., Water & Light, Box 209, Hubbard, Ohio (Apr. '53) *MRP*
- Johnson, Owen J.**, San. Engr., Omaha Dist., Corps of Engrs., 1709 Jackson St., Omaha, Neb. (Apr. '53) *RP*
- Johnson, Walter F.**, see Emporia (Kan.)
- Johnston, R. B.**, Supt., Water Dept., Gatlinburg, Tenn. (July '53)
- Jones, O. C.**, Water Works Operator, San Jose Hills Water Co., Puente, Calif. (Oct. '52)
- Kahn, Albert**, Associated Architects & Engineers, Inc., S. Saulson, Vice-Pres., 345 New Center Bldg., Detroit 2, Mich. (Corp. M. Jan. '53) *R*
- Kann, Bruce E.**, Neptune Meter Co., 434 E. Myrtle Ave., Glendora, Calif. (Oct. '50)
- Kaske, Harry R.**, Washington Suburban Sanitary Com., 11810 Gordon Rd., Quaint Acres, Silver Spring, Md. (July '50)
- Keegler, Kenneth K.**, Sales Repr., Diamond Alkali Co., 633 Penton Bldg., Cleveland 13, Ohio (Jan. '53) *MRP*
- Kelth, Scott**, Partner, Metcalf & Eddy, 1300 Statler Bldg., Boston 16, Mass. (Jan. '53) *RP*
- Kemble, Joe R.**, see River Oaks (Tex.)
- Kennedy, Norvin John**, Cons. Engr., Kennedy Eng. Co., 1131 S. Broadway, Los Angeles, Calif. (Oct. '52)
- Kidd, A. A.**, Engr.-Mgr., Public Utilities Com., Box 640, Cochrane, Ont. (Jan. '53)
- Kier, John Caspar**, Asst. Operator, Water Demineralizing Plant, Jones & Laughlin Steel Corp., Aliquippa, Pa. (Jan. '53)
- Kilgore, W. E.**, see Swayzee (Ind.) Water Works
- Kimrey, W. E.**, W. E. Kinney & Sons Construction Co., Sonora Route, San Angelo, Tex. (July '53) *R*
- King, H. McKay**, Engr. Service, 411 Madison St., Clarksville, Tenn. (July '39) *MP*
- Kinney, James T.**, Sales Engr., Simplex Valve & Meter Co., 68th & Upland Sts., Philadelphia 42, Pa. (Apr. '53)
- Kinzer, Walter L.**, Utility Engr., Ethyl Corp., Box 472, Pasadena, Tex. (Jan. '53) *MR*
- Kirchman, William B.**, Supt., Water Dept., Williamson, W. Va. (May '31)
- Kitchen, Richard D.**, Sales Repr., Mueller Co., 3404 Galloway Ave., Jackson, Miss. (Jan. '53)
- Klepper, Howard S.**, Partner, Rummel, Klepper & Kahl, 1021 N. Calvert St., Baltimore 2, Md. (Oct. '52)
- Klever, Charles F.**, Asst. Supt. of Water Plants, Metropolitan Utilities Dist., 18th & Harvey Sts., Omaha 2, Neb. (Oct. '52)
- Koch, G. Ashburn**, Pres., Evansville Water Works Board of Trustees, 3rd & Walnut Sts., Evansville, Ind. (Jan. '53)
- Koch, Leo J.**, Sr. San. Engr., South Dist. Filtration Plant, 3300 E. Cheltenham Pl., Chicago 49, Ill. (Jan. '53)
- Kollar, Konstantine L.**, Chief Construction Engr., Inst. of Inter-American Affairs, Health, Welfare & Housing Div., c/o U.S. Embassy, Quito, Ecuador (Jan. '53) *MRP*
- Kothe, D. W.**, see Elyria (Ohio)
- Kramer, Harrison W.**, Carey & Kramer, 1917-1st Ave., Seattle 1, Wash. (Oct. '52)
- Kriesant, Carl J.**, see Orchard Dale Service Co.
- Kronmiller, Bill A.**, Dist. Service Engr., The Flox Co., Inc., 1516 Oak St., Alameda, Calif. (Jan. '53) *P*
- Kuckuck, F. D.**, Director, Public Works & Utilities, Eau Claire, Wis. (Apr. '53) *M*
- Labarrere, C. Maurice**, Vice-Pres., Dussaq Co., Ltd., Apdo. 278, Havana, Cuba (Jan. '53)
- LaBelle, James C.**, Civ. Engr., III, Water Distr. Div., 404 City Hall, Chicago, Ill. (Apr. '53) *MP*
- La Habra, City of**, Harry Billings, La Habra, Calif. (Corp. M. Apr. '49)
- Lahman, William C.**, Town Clerk, Ransley, Colo. (Oct. '52)
- Lane, Guy F.**, Sales Engr., Johns-Manville Sales Corp., Box 186, Ramseur, N.C. (Oct. '52)
- Lanning, Robert L.**, Mgr., Lindmore Irrigation Dist., Lindsay, Calif. (Jan. '53) *M*
- Larsen, Carl L.**, Pres., Peerless Service Co., Box 326, Orion, Ill. (Jan. '53) *MP*
- Laubenstiel, Donald F.**, Director of Utilities, Water & Light Dept., Two Rivers, Wis. (Jan. '53) *MP*
- Lawson, Dale R.**, Supervisor of Purification, Water Dept., City Hall, Watertown, N.Y. (Jan. '53) *MP*
- Leaser, Kenneth**, Supt., Filter Plant, City Water Dept., Box 368, Twin Falls, Idaho (Apr. '53) *MRP*
- Lecklider, Kenneth**, Supt., Water & Sewage, Munic. Operation, Box 213, Englewood, Ohio (Jan. '53)
- Lee, Robert L.**, Asst. Supt. & Engr., Water Com., Medford, Ore. (Jan. '53) *M*
- Lee, William L.**, Design Engr., Smith & Gillespie, Box 1048, Jacksonville 1, Fla. (Apr. '53) *M*
- Leeson, Harold W.**, Mgr., Luipold Eng. Sales Co., 1930 W. Olympic Blvd., Los Angeles 6, Calif. (July '46)
- Leffingwell, Frank**, see Hartford City (Ind.) Water Works
- Lemaster, Joe T.**, Water Supt., Oroville, Wash. (Jan. '53) *M*
- Lenox, Stanley**, Project Engr., The Permutit Co., 330 W. 42nd St., New York 36, N.Y. (Jan. '53) *P*
- Lents, Ralph C.**, see Plymouth (Ind.) City Water Dept.
- Leon, Walter H.**, Western Regional Mgr., Heavy Chemicals Dept., American Cyanamid Co., Box 5670-A, Chicago 80, Ill. (Jan. '53) *P*
- Leonardson, Axel William**, Field Repr., Clay Sewer Pipe Assn., Malden Bridge, N.Y. (Oct. '52)
- Leopold, F. B., Co., Inc.**, F. O. Leopold, Pres., 2413 W. Carson St., Pittsburgh 4, Pa. (Assoc. M. Jan. '53)
- Leopold, F. O.**, see F. B. Leopold Co., Inc.
- Leopold, Wilbur R.**, Asst. to the Vice-Pres., Worthington Corp., 401 Worthington Ave., Harrison, N.J. (Jan. '53)
- Level, Joel**, Supt. of Constr., Encrete, Inc., 3360 W. Dorothy Lane, Dayton, Ohio (Apr. '53) *R*
- Levin, Gilbert V.**, Health Dept., 1301-15th St., N.W., Apt. 513, Washington, D.C. (Oct. '48)
- Lewis, A. Reese**, Foreman, Water Dept., 8061 Densmore Ave., Seattle, Wash. (Jan. '53) *M*
- Lewis, Harry**, Gen. Mgr., Varner Well Pump Co., 1348 Atlantic St., Dubuque, Iowa (Jan. '45)
- Lexington, Town of**, A. Kyle Roop Jr., Town Mgr., 1-5 Court House Square, Lexington, Va. (Corp. M. Jan. '53)
- Limerick, James A., Jr.**, Asst. Engr., Bureau of San. Engr., Dept. of Health, State Office Bldg., Richmond, Va. (Apr. '53) *P*
- Lindsay, Charles C.**, Cons. Engr., 3542 Connaught Ave., Montreal 28, Que. (July '53)
- Lindsay, James K.**, Asst. San. Engr., State Dept. of Health, Oklahoma City, Okla. (Jan. '53) *MRP*
- Line, John W.**, Supt., Water & Gas, Box 592, Anahau, Tex. (Jan. '53) *MRP*
- Linton Munic. Water Co.**, Hubert C. Heaton, Supt., City Hall, Linton, Ind. (Corp. M. Apr. '46)
- Litchfield Water Dept.**, Louis Nelson, Supt., Litchfield, Minn. (Munic. Sv. Sub. Jan. '53)
- Little, H. W.**, Mgr., Public Utilities Com., Brockville, Ont. (Apr. '53)
- Livingston, Wayne E.**, Chemist, City Water Dept., Bloomington, Ind. (Jan. '53) *P*

- Lobo, Humberto, Jr.**, Mgr., Fabricas Proteza, S. A., Apdo. 1141, Monterrey, Mexico (Apr. '53)
- Lockard, Norman R.**, Office Mgr., Water Works, City Hall, Grand Rapids, Mich. (Jan. '53) *M*
- Lockport Com. of Public Works**, H. R. Conley, Comr., City Bldg., Lockport, N.Y. (Munic. Sv. Sub. Jan. '49)
- Lodi Board of Public Affairs**, R. O. Eaken, Supt. of Utilities, Lodi, Ohio (Corp. M. Jan. '53)
- Loftus, James J.**, San. Engr., San. Eng. Branch, Engineer Research & Development Labs., Fort Belvoir, Va. (July '53) *P*
- Lohmeyer, George T.**, Supt., Sewage Treatment Plant, Univ. of Florida, Gainesville, Fla. (Jan. '53)
- Long, John R.**, Asst. Operator, Central Water Plant, 27 Artesian St., Houston 22, Tex. (Apr. '53) *M*
- Long, Paul A.**, Supt. of Distr., Bureau of Water, 1922 Whitehall St., Allentown, Pa. (Apr. '53) *M*
- Loreaux, William D.**, Supt., Water Dept., 618 Toledo St., Dundee, Mich. (Apr. '53) *MP*
- Louisville Water System**, H. C. Coggins, Supt., Box 208, Louisville, Miss. (Corp. M. Oct. '52)
- Love, E. E.**, Asst. Supt. Water Works Dept., Tuscaloosa, Ala. (Apr. '53) *MP*
- Loy, Harvey O.**, Supt., Water & Sewage, Board of Public Affairs, McComb, Ohio (Jan. '53) *M*
- Lukrofska, L. J.**, Supt. of Distr., Missouri Water Co., 123 W. Kansas St., Independence, Mo. (July '53) *M*
- Lund, Russell D.**, Exec. Secy., National Assn. of Soft Water Service Operators, 111 W. Washington, Chicago 2, Ill. (Apr. '53) *P*
- Lunbach, R. J.**, Field Engr., Inflico, Inc., 325 W. 25th Pl., Chicago 16, Ill. (Jan. '53) *P*
- Lutz, Everett W.**; see Solvay (N.Y.)
- Lynch, L. C.**; see Upland (Ind.) Water Works
- Lynch, William O.**, Graduate Student, Dept. of Civ. & San. Eng., Massachusetts Inst. of Technology, Cambridge 39, Mass. (Jr. M. Jan. '53)
- MacDonald, Alex J.**, Dist. Repr., Wallace & Tiernan, Ltd., 37 Sackville St., Halifax, N.S. (Apr. '53)
- Macek, Charles W.**, Water Supt., City Water Dept., Drawer 32, Rosenberg, Tex. (Jan. '53) *M*
- MacLean, John R. B.**, Sales Engr., H. L. Blachford, Ltd., 977 Aqueeduct St., Montreal 3, Que. (Apr. '53)
- Mahauler, Charles C.**, Water Supt., Liberty, Tex. (Apr. '53) *M*
- Mallander, Richard George**, Div. Mech. Engr., Shell Oil Co., Box 1191, Tulsa 2, Okla. (Jan. '53)
- Malone, Harold L.**, San. Engr., State Dept. of Health, Oklahoma City 5, Okla. (Jan. '45)
- Maloy, Charles R.**, Fish Culturist, Water Dept., Municipal Bldg., Oklahoma City, Okla. (Apr. '53) *R*
- Manchester, City of**, W. C. Hanchen, Supt., Water Works, Manchester, Ga. (Corp. M. Jan. '53)
- Mankato, City of**, K. F. Sanborn, City Clerk, Mankato, Kan. (Corp. M. Jan. '53) *R*
- Markwood, Donald H.**, Sales Engr., Johns-Manville Sales Corp., 11 Jarvis-Yawkey Court, Saginaw, Mich. (Jan. '53) *MR*
- Marmaduke, City of**, K. C. Butler, Marmaduke, Ark. (Corp. M. Apr. '46)
- Marocco, Raymond J.**, Civ. Engr., Marocco Construction Co., 231 S. Exeter St., Baltimore 3, Md. (Apr. '53) *M*
- Marshall, G. P.**; see Granite Falls (N.C.)
- Marshalltown Water Works**, Ray Hoops, Chemist, Marshalltown, Iowa (Corp. M. Jan. '53)
- Martin, G. E.**, Mgr., The Waynesburg Water Co., 35 N. Washington St., Waynesburg, Pa. (Jan. '53)
- Martinsville Water Utility**, H. H. Thacker, Chairman of Water Works Committee, 540 E. Walnut St., Martinsville, Ind. (Corp. M. Jan. '53)
- Marzitelli, Frank D.**, Comr. of Public Works, Board of Water Comrs., 234 City Hall, St. Paul 2, Minn. (Jan. '53)
- Mason, Edward**, Water Supt., Woodsboro, Tex. (Jan. '53) *M*
- Matthews, George E.**, Supt., Maint. & Installation, Water, Sewer & Meter Dept., City Yards, 1000 Michigan, Muskegon, Mich. (Jan. '53) *M*
- Mauch, Clair A. L.**, Black & Veatch, Cons. Engrs., 4706 Broadway, Kansas City, Mo. (Jan. '53) *RP*
- Maurer, Edward J.**; see East Aurora (N.Y.)
- May, Edgar B., Jr.**, Assoc. Engr., Water Dept., 402 Municipal Bldg., Akron 8, Ohio (Oct. '52)
- McCabe, Frank D.**, Foreman, Water Dept., 6818 Heeler, Lincolnwood, Ill. (Jan. '53) *M*
- McCabe, J. R.**, Supt., Water & Sewage Plants, National Fireworks Ordnance Corp., N.A.D., Shumaker, Ark. (Jan. '53)
- McCaskey, A. E., Jr.**, Head, Dept. of Eng., Marshall College, Huntington 1, W.Va. (Oct. '52)
- McComb, George B.**, Pres., Standard Pipeprotection, Inc., 3000 S. Brentwood Blvd., St. Louis 17, Mo. (Jan. '53) *M*
- McCornack, Roy E.**, Chief Inspector, City Water Dept., 1721 N.W. 32nd St., Oklahoma City, Okla. (Apr. '53) *M*
- McCown, Floyd C.**, Sales Repr., Mueller Co., 681 Market St., San Francisco 5, Calif. (Jan. '53) *M*
- McDaniel, Edward E.**, Water Supt., 804 Pine St., Harper, Kan. (Jan. '53) *MR*
- McElwain, Harold B.**, Comr. of Public Works, 242 Main St., W., Rochester, N.Y. (Apr. '53)
- McFarland, Carl**, Supt., Water & Sewer Dept., City Hall, Tyler, Tex. (Jan. '53) *M*
- McGhee, J. Stuart**, Chemist & Bacteriologist, Newport News Water Works Com., Filtration Plant, Denbigh, Va. (Jan. '53) *P*
- McGinnis, William H.**; see Cambridge (Mass.) Water Dept.
- McGowan, C. C., Jr.**, Partner, C. C. McGowan Co., Box 166, Greer, S.C. (Oct. '52)
- McKenna, Patrick H.**, Triple X Bottling Co., Box 808, Galveston, Tex. (Jan. '53) *P*
- McKewen, Thomas Donald**, Public Health Engr., State Dept. of Health, 2411 N. Charles St., Baltimore 18, Md. (Jan. '53)
- McKeynolds, John S.**, Chemist, Water Dept., 200 N. Walker, Oklahoma City 2, Okla. (Apr. '53) *RP*
- McViegh, James B.**, Sales Engr., Glamorgan Pipe & Foundry Co., Lynchburg, Va. (Jan. '53)
- Means, Fletcher W.**, Vice-Pres., Gen. Mgr., Consumers Water Co., 95 Exchange St., Portland 6, Me. (Jan. '53) *M*
- Medlek, R. C.**, Salesman, Mueller Co., 519 Kenbrook Dr., Worthington, Ohio (Jan. '53) *MRP*
- Mengerink, Carson F.**, Owner, Carson F. Mengerink, 1116 Stevenson St., Napoleon, Ohio (Affil. Jan. '53)
- Merchant, Milton H.**, Asst. Mgr., Chemical Sales, The American Agricultural Chemical Co., 204 S. Forman Ave., Detroit 17, Mich. (Oct. '52)
- Michigan Hydrant & Valve Mfg. Co.**, Frederick A. DeWitt, Vice-Pres., 8747 Brandt, Dearborn, Mich. (Assoc. M. July '53)
- Michigan State College**, Bldgs. & Utilities Dept., Norman E. Tufford, Mech. Engr., East Lansing, Mich. (Munic. Sv. Sub. Apr. '53)
- Milby, A. B.**, Inspector, Water Dept., Municipal Bldg., Oklahoma City, Okla. (Apr. '53) *M*
- Miles, Clifford Roy**, City Mgr., Gaylord, Mich. (Jan. '53)
- Miles, Henry J.**, Prof. of Civ. Eng., A & M College of Texas, 1011 Walton Dr., College Station, Tex. (Jan. '53) *M*
- Miller, David R.**, San. Engr., Quarters 10, Foss Acres, Great Lakes, Ill. (Oct. '49)
- Miller, Lawrence E.**, Civ. Engr., Leo A. Daly Co., 633 Insurance Bldg., Omaha, Neb. (July '53) *P*
- Miller, Rube L.**, Northwest Mgr., Worthington-Gamon Div., 2616 Western Ave., Seattle 1, Wash. (Apr. '44)
- Milliken, Robert J.**, Asst. Valuation Engr., Southern California Water Co., 11911 S. Vermont, Los Angeles 55, Calif. (July '53) *M*
- Mills, Richard H.**, Asst. Chief Chemist, Orlando Utilities Com., Orlando, Fla. (Jan. '53) *P*
- Mitchell, J. H.**, Utilities Engr., The Proctor & Gamble Defense Corp., Box 647, Amarillo, Tex. (Jan. '53)
- Mockmore, C. A.**, Head, Civ. Eng. Dept., Oregon State College, Corvallis, Ore. (Jan. '53)

- Modjeska Service Co.**, Frank L. Smith, Pres., Box 50, Star Route, Orange, Calif. (Corp. M. Jan. '53)
- Montanari, Francis W.**, Chief Engr., Mexican Field Party, Inst. of Inter-American Affairs, Apt. 23 BIS, Mexico D.F., Mexico (Jan. '53) *MP*
- Montgomery, J. H.**, Mgr., Water Works, North Little Rock, Ark. (Oct. '38)
- Montgomery, W. E.**, Meter Mechanic-Machinist, Duty Water Div., 27 Artesian, Houston, Tex. (Oct. '52)
- Montgomery County Sanitation Dept.**, E. D. Smith, County San. Engr., 11 New Court House, Dayton, Ohio (Munic. Sv. Sub. Apr. '53)
- Moody, Virgil B.**, Sr. Sanitarian, State Dept. of Health, Bureau of San. Engr., Box 1741, Fort Worth, Tex. (Apr. '53) *M*
- Moore, Charles F.**, Utility Engr., Arabian American Oil Co., 505 Park Ave., New York 22, N.Y. (Apr. '53) *MP*
- Moore, Clarence S., Jr.**, Water Consultant, E. I. du Pont de Nemours & Co., Inc., Eng. Service Div., Eng. Dept., Wilmington 98, Del. (Jan. '53) *RP*
- Moore, Lee S.**, 1206 Grand Ave., Washington, Ind. (Apr. '44) *P*
- Moore, Sam M.**, Mgr., Harris County Water Control & Improvement Dist. No. 32, 13349 Vicksburg, Houston 15, Tex. (Apr. '53) *MRP*
- Moore, Walter J.**, Resident Engr., Cornell-Howland-Hayes & Merryfield, 615 River Ave., Eugene, Ore. (Jan. '53)
- Moreno, S. J.**; see Pleasantville (N.Y.)
- Morris, Leo**, Supt., City Water Dept., Box 202, Palco, Kan. (Jan. '53) *MRP*
- Morrison, George E.**, City Engr., Kimball, Neb. (Apr. '53) *MRP*
- Morrison, Lloyd Fletcher**, Engr., Canadian Wood Pipe & Tanks, Ltd., 550 Pacific St., Vancouver, B.C. (July '53) *M*
- Morse, Charles A., Jr.**, World Health Organization, c/o UNRWA, Maison Unesco, Beirut, Lebanon (Oct. '52)
- Morsy, Ahmad Shawky**, Inspector, Villages Services Dept., 22 Giza St., Giza, Egypt (Apr. '53) *RP*
- Morton, Swep, Jr.**; see St. Helens (Ore.)
- Mouser, M. D.**, Supt., Munic. Water Works, Box 332, Stamps, Ark. (Apr. '53)
- Muckelstone, R. F.**, Professional Engr., 13 Broad St., Brockville, Ont. (Apr. '53)
- Muller, John F.**, Office Supervisor, Dept. of Water Supply, 35 Oak St., Ridgewood, N.J. (Jan. '53)
- Murphy, Clarence F.**, Supt. of Water & Sewers, Trustees of Public Affairs, 344 W. Harrison St., Barnesville, Ohio (Jan. '53) *MP*
- Murray, DeVere C.**, Supt., Water & Sewage, Box 115, Lake Odessa, Mich. (Apr. '53) *M*
- Myers, Thomas R.**, San. Chemist, Dept. of Water Supply, Jefferson Ave., Detroit 14, Mich. (Apr. '53) *MP*
- Nash, Wiley M.**, Supt., Water Works, Deland, Fla. (Jan. '53) *MRP*
- Nelde, J. Francis**, City Engr., Box 384, Newark, Del. (Oct. '52)
- Nelson, Louis**; see Litchfield (Minn.) Water Dept.
- Nelson, Melvin O.**, Regional Public Health Engr., Regional Public Health Service No. 3, State Dept. of Health, Spencer, Iowa (Apr. '53) *P*
- Nelson, Wayne**; see Geneva (Ind.)
- Nemec, J. L.**; see Oswego (Ore.)
- Neubauer, George H.**, Pres., Florida Industrial Equipment Div., Inc., 2514 Coral Way, Miami, Fla. (Jan. '53) *RP*
- Neudecker, Ralph W.**, Sales Repr., Hersey Mfg. Co., 830 N. Wabash Ave., Chicago, Ill. (Jan. '53)
- Neumann Co.**, Walter G. Neumann, Supt., 946 W. 69th St., Chicago 21, Ill. (Assoc. M. Oct. '52)
- Newell, Fred T.**, Mech. Engr., Dresser Mfg. Div., Bradford, Pa. (Jan. '53) *D*
- New Haven Water Works**, Charles Wisneski, Supt., City Hall, New Haven, Ind. (Corp. M. Jan. '53)
- New Ulm Public Utilities Com.**, H. P. Hauenstein, Pres., New Ulm, Minn. (Corp. M. Jan. '53)
- Nich, Steven W.**, San. Engr., Cook County Health Dept., 737 S. Wolcott, Chicago, Ill. (Jan. '53)
- Noland Co., Inc.**, Guy O. Guest, Repr., Newport News, Va. (Assoc. M. July '53)
- Nordby, Archie D.**, Supt., Public Utilities, Montevideo, Minn. (Apr. '53) *MR*
- Nordmann, Joseph B.**, Director, Pacific Chemical Consultants, 14203 Bessemer St., Van Nuys, Calif. (Jan. '53) *P*
- Norris, Dan P.**, Civ. Engr., Arabian American Oil Co., 505 Park Ave., New York, N.Y. (Jan. '53) *P*
- North Manchester Water Works**, Paul Hathaway, Supt., City Hall, North Manchester, Ind. (Corp. M. Oct. '52)
- Novak, Jess**, Supt. of Utilities, Peru, Neb. (Apr. '53) *MR*
- Nugent, Fred F.**, Chairman, Water Com., Water Dept., Town Hall, Harrison, N.J. (Jan. '53) *M*
- Oatman, Edward D.**, Salesman, Johns-Manville Sales Corp., 720—14th Ave., S.E., Minneapolis 14, Minn. (Jan. '53)
- Obadia-Beracasa, Arturo**, Eng. Student, Univ. of Iowa, 223 S. Quadrangle, Iowa City, Iowa (Jr. M. Jan. '53) *RP*
- Ocampo, Lamberto U.**, Asst. San. Engr., Metropolitan Water Dist., 176 Arroceros St., Manila, P.I. (Jan. '53) *MRP*
- Odell, Rex**, Member, Water Board, 310 E. Magnolia St., Bellingham, Wash. (Jan. '43) *M*
- Oertel, George H.**, Chem. Engr., Chrysler Jet Engine, Box 1116, Detroit 31, Mich. (Apr. '53) *MRP*
- Olson, Harold Leonard**, Mgr., Transite Pipe Sec., Johns-Manville Sales Corp., 116 New Montgomery, San Francisco 5, Calif. (Jan. '53)
- Olson, Rollind H.**, Supt. of Utilities, 109 S. Birch, Hillsboro, Kan. (Apr. '53) *RP*
- Oneonta Dept. of Public Service**, Earl S. Walsh, Gen. Foreman, Bureau of Water, 130 East St., Oneonta, N.Y. (Munic. Sv. Sub. Jan. '53)
- Opeka, Michael**, Supt., North Chicago Water Works, North Chicago, Ill. (Jan. '53) *MP*
- Orchard Dale Service Co.**, Carl J. Kriesant, Pres.-Gen. Mgr., 15703 E. Whittier Blvd., Whittier, Calif. (Corp. M. Jan. '53)
- O'Reilly, John J.**, Sales Engr., Henry Pratt Co., 30 Church St., New York, N.Y. (Apr. '53)
- Osborn, George I.**, Water Supt., City Water Dept., 2175 Cherry Ave., Signal Hill 6, Calif. (Jan. '53) *MRP*
- Oswego, City of, J. L. Nemec**, Water Dept. Supt., 40 A Ave., Oswego, Ore. (Corp. M. Apr. '53) *M*
- Otis, James I.**, Chemist, Metcalf & Eddy, 1300 Statler Bldg., Boston, Mass. (Jan. '53) *RP*
- Overesch, Harry B.**; see Elwood (Ind.) Munic. Water Works
- Overstreet, Cecil C.**, City Engr., Prescott, Ariz. (Oct. '49) *M*
- Oxford Munic. Water Utility**, Thurman Shoults, Supt., Oxford, Ind. (Corp. M. Jan. '53)
- Paes de Andrade, Lauro**, Rua Miguel Lemos 25, Apdo. 202, Rio de Janeiro, Brazil (Jr. M. Jan. '53)
- Palmer, Cordes P.**, Engr., Palmer & Malone, 64 Law Range, Sumter, S.C. (Apr. '53)
- Palmer, Ralph L.**, Gen. Foreman, Reclamation Dept., Standard Oil Co. of Indiana, Whiting, Ind. (Jan. '53) *RP*
- Palmer, Edwin W.**, Sr. Mech. Engr., Southern California Edison Co., Box 351, Los Angeles 53, Calif. (Jan. '53) *R*
- Pao-Ching, Liu**; see Taiwan (China) Water Works Assn.
- Paoli, Town of, W. J. Cox**, Utility Supt., Water Dept., Paoli, Ind. (Corp. M. Apr. '51)
- Parker, Aisey C.**, City Engr., Tuscaloosa, Ala. (Apr. '53) *R*
- Parks, A. D.**, Sales Engr., Mueller Co., 3723 Lochearn Dr., Baltimore 7, Md. (Apr. '53) *M*
- Patch, Ralph D.**, Head, Chem. Products Div., Esso Standard Oil Co., Box 551, Baton Rouge 1, La. (Jan. '53) *P*
- Pearce, Richard William**, Mgr., Chlorinizer Sales, Builders-Providence, Inc., Box 1342, Providence, R.I. (Jan. '53)
- Pearson, Henry**, Asst. Supt., Citizens Water Supply Co., 50 Water Mill Lane, Great Neck, N.Y. (Apr. '53) *M*

- Peck, Matt R., Jr.**, Business Mgr., General Pump Service, Inc., 12735 S. Main St., Los Angeles 61, Calif. (Apr. '53) *M*
- Peltier, E. P.**, Gen. Foreman, Water Dept., 714 Washington St., Vancouver, Wash. (Apr. '53) *MRP*
- Pendleton Mfg. Co.**, Hugh E. Bolt, Filter Plant Operator, La France, S.C. (Corp. M. Jan. '53)
- Pennsylvania Drilling Co.**, Robert W. Wilson, Div. Mgr., 1201-1215 Chartiers Ave., Pittsburgh 20, Pa. (Assoc. M. July '53)
- Pentiction, Corp. of City of P.**, G. Walker, City Engr., Pentiction, B.C. (Munic. Sv. Sub. July '53)
- Peterson, Carlton J.**, Utilities Supt., Monrovia, Calif. (Oct. '52)
- Peterson, Roger B.**, Sales Engr., Builders-Providence, Inc., 913 Arctic Bldg., Seattle 4, Wash. (Oct. '52)
- Peterson, W. J.**, Service Dept., Central Kansas Power Co., Atwood, Kan. (Apr. '53) *MP*
- Petrica, James**, Designer, Whitman, Requaardt & Assoc., 1304 St. Paul St., Baltimore, Md. (Jan. '53)
- Petrie, Albert J.**, Supt., Munic. Com., Box 37, Mohawk, N.Y. (Jan. '53) *M*
- Petty, Thomas**; see Forest City (N.C.)
- Pew, Arthur, Jr.**, Arthur Pew Construction Co., 3110 Roswell Rd., Atlanta, Ga. (Jan. '53) *RP*
- Pfeffer, Ralph H.**, Chief Ranger, Fish & Game Div., Water Dept., 1015 N.W. 31st St., Oklahoma City, Okla. (Apr. '53) *R*
- Phemister, George P.**, Engr., Mech. Div., Underwriters Labs. of Canada, 340 Richmond St., West Toronto, Ont. (Jr. M. Jan. '53) *MRP*
- Phillips, Joseph L.**, Sales Engr., Glamorgan Pipe & Foundry Co., Lynchburg, Va. (Jan. '53)
- Phillips Petroleum Co.**, George R. Benz, Mgr., Eng. Dept., Bartlesville, Okla. (Corp. M. Jan. '53)
- Pickett, Taylor C.**, Gen. Mgr., Harris County Water Control & Improvement Dist. No. 22, 8330 Cannon St., Box 14232, Houston 21, Tex. (Jan. '53) *M*
- Pierce, Jack W.**, Office Engr., Eastern Municipal Water Dist., Box 248, Hemet, Calif. (Oct. '52)
- Pike, George R.**, Sales Engr., Rockwell Mfg. Co., 3136 E. 11th St., Los Angeles 23, Calif. (Apr. '53) *RP*
- Pipp, Frank J.**, Supervising Teller, Dept. of Water Supply, 735 Randolph, Detroit 26, Mich. (July '53) *M*
- Pleasant Grove Services, Inc.**, Olen Turner, Pres., 1207 S. Buckner Blvd., Dallas, Tex. (Corp. M. Jan. '53)
- Pleasantville, Village of S. J.**, Moreno, Village Mgr., 48 Wheeler Ave., Pleasantville, N.Y. (Munic. Sv. Sub. Jan. '53)
- Plymouth City Water Dept.**, Ralph C. Lentz, Supt., 200 S. Michigan St., Plymouth, Ind. (Corp. M. Jan. '53)
- Pontow, R. E.**, City Engr., 1444 W. Garvey Blvd., West Covina, Calif. (Apr. '53) *M*
- Poole, Gordon D.**, Mgr., Transite Pipe Dept., Canadian Johns-Manville Co., Ltd., 199 Bay St., Toronto, Ont. (Jan. '53)
- Poore, Clyde Russell**, Asst. Sales Engr., Permutit Co., 330 W. 42nd St., New York 36, N.Y. (Jan. '53)
- Porter, Keith V.**, Special Repr., Water Works & Industrial Supply Co., Box 1985, Huntington, W.Va. (Jan. '53)
- Porter, Roy C.**, Supt., Water Dept., Box 164, Coupeville, Wash. (Jan. '53) *M*
- Powers, James L.**, Chemist, Munic. Light & Water Works, Benton, Ark. (Apr. '53) *MRP*
- Powers, John B.**, Eng. Repr., W. S. Dickey Mfg. Co., Texarkana, Tex. (July '53) *M*
- Prasad, Mahvir**, Irrigation Advisor, Government of India, Ministry of Food & Agriculture, New Delhi, India (Jan. '53) *R*
- Pressley, Robert C.**, Engr., Chemist, Philadelphia Bureau of Water, 27A Wayne Gardens, Collingswood, N.J. (July '53) *MP*
- Prine, M. F.**, Meter Foreman, Olympia Water Dept., 914 E. 14th St., Olympia, Wash. (Apr. '53) *MRP*
- Proctor, W. D.**, Vice-Pres., C. C. Parker & Assoc., Ltd., 63 John St., Hamilton, Ont. (Apr. '53)
- Puga, Ambrosio E.**, Prof. of Water Works & Sanitation, Guayaquil Univ., Casilla 1031, Guayaquil, Ecuador (Jan. '53) *M*
- Purvis, V. O., Jr.**, Engr., Danco Construction Co., Box 548, North Little Rock, Ark. (Jan. '53)
- Rainier, City of**, William Robinson, Water Supt., City Hall, Rainier, Ore. (Munic. Sv. Sub. Jan. '53)
- Raritan Township Water Dept.**, Bruce Egertz, Comr., Dept. of Public Affairs, Woodbridge & Plainfield Aves., Nixon, N.J. (Corp. M. Apr. '53)
- Reakes, Herbert G.**, Mgr., Edgemont Gardens Mutual Water Co., 24195 Fir Ave., Snyunemead, Calif. (Apr. '53) *M*
- Redfern, Harry J.**, Sr. Civ. Engr., Public Works Dept., 1612 S St., Bakersfield, Calif. (Apr. '53) *R*
- Redman, William J.**, San. Chemist, Filtration Plant, Water Works Park, Detroit 14, Mich. (Jan. '53) *P*
- Reede, Edward J.**, Water Foreman, Pacific Power & Light Co., 405 N. Dunham St., Prineville, Ore. (Apr. '53) *MRP*
- Rees, Carl**, Asst. Supt., Water Dept., 621 E. Sierra Madre Blvd., Sierra Madre, Calif. (Jan. '53)
- Reeve, W. T. N.**, Deputy Chief Engr., Sir Alexander Gibb & Partners, 4 Wellington St., E., Toronto, Ont. (Apr. '53)
- Reis Dias, Fernando**, State Engr., Div. of Rural Sanitation, Rua Cap. Pinto Ferreira No. 38, São Paulo, Brazil (Jan. '53) *P*
- Reyes, Pedro Rodriguez**, Chief Chemist, Grupo Quimico, Relo, Miguel E. Schulz 110, Mexico 4, D.F., Mexico (Jan. '53) *P*
- Reynolds, G. R.**, Supt., Water Works, Box 402, Leaksville, N.C. (Jan. '53) *MP*
- Richards, John A.**, Pres., Pipe Co., Inc., 539-1st Ave., South Seattle, Wash. (Jan. '53) *M*
- Richards, Joseph J.**, Filtration Plant Operator, 408 Morris Ave., Haledon, N.J. (Apr. '53) *MRP*
- Richardson, E. William**, Pres. & Gen. Mgr., Cathodic Control Corp., 492 Commercial Bldg., Dayton, Ohio (Jan. '53)
- Richardson, Harold C.**, Supt., Westvale Water Dist., 112 Wilshire Rd., Syracuse 4, N.Y. (Jan. '53) *M*
- Riddell, Matthew D. R.**, Asst. Engr., Greeley & Hansen, 220 S. State St., Chicago 4, Ill. (Jan. '53) *P*
- Ridley, Theodore E.**, City Mgr., Carey, Ohio (July '53) *M*
- Rieser, D. A.**, Asst. Engr., Chicago, Milwaukee, St. Paul & Pacific R.R. Co., 809 Union Station, Chicago, Ill. (Jan. '53) *RP*
- Rigby, John W.**, Plant Supt., Shenango Valley Water Co., Box 532, Sharon, Pa. (Jan. '53) *M*
- Rigo, Paul W.**, Supt., Joseph Miele Construction Co., 90 Millburn Ave., Maplewood, N.J. (Jan. '53) *MR*
- Rimmer, Bob Lee**, Gen. Mgr., El Dorado Water Corp., 307 N. Washington St., El Dorado, Ark. (Jan. '53)
- Ritchie, Claude C.**, Supt., Water Dept., City Hall, Redlands, Calif. (Apr. '53) *M*
- Rittenberg, Paul**, Comr., Passaic Valley Water Com., 140 Market St., Paterson, N.J. (Apr. '53)
- River Oaks, City of**, Joe R. Kemble, Director of Public Works, 1144 Greenbriar, Fort Worth, Tex. (Munic. Sv. Sub. July '53)
- Rizzie, Joseph F.**, Supt. of Water, Bessemer Township, Ramsay, Mich. (Apr. '53) *P*
- Roberts, J. K.**; see Florida Public Utilities Co.
- Robertson, William J.**, City Water Supt., 401 S. Santa Fe, Bartlesville, Okla. (Jan. '53) *M*
- Robinson, Arthur W.**, Supt., Water Dept., Box 82, Berrien Springs, Mich. (Jan. '53)
- Robinson, Frank**, Supt., City Water Dept., 407 Morton St., East Liverpool, Ohio (Apr. '53) *M*
- Robinson, John W.**, Ground Water Geologists, 4603 S. J St., Tacoma 8, Wash. (Apr. '53) *MRP*
- Robinson, William**; see Rainier (Ore.)
- Rogan, Peter W.**, Asst. Chief Engr., Boiler Div., Maxim Silencer Co., 85 Homestead Ave., Hartford, Conn. (Oct. '52)
- Romanko, Henry**, Chemist, St. Louis County Water Co., 6600 Delmar Blvd., University City 5, Mo. (Apr. '53) *P*
- Roop, A. Kyle, Jr.**; see Lexington (Va.)

- Rose, Carl M.**, Sales Repr., Keesbey & Mattison Co., 1340 La Monte St., Houston, Tex. (Oct. '52)
- Rose, Herbert E.**, Research & Development Engr., The Superior Oil Co., Box 1031, Bakersfield, Calif. (Jan. '53) *P*
- Roudebush, Leonard L.**, Asst. Supt., Homer City Munic. Water Co., 25 W. Church St., Homer City, Pa. (Jan. '53) *MR*
- Rountree, Benjamin F.**, Utility Supt., Kountze, Tex. (Jan. '53) *MRP*
- Rountree, W. G.**; see Hamlin (Tex.)
- Rowland, M. T.**, Mgr., West Texas Dist., The Layne-Texas Co., Ltd., 3103 Douglas, Midland, Tex. (Jan. '53) *R*
- Rowse, D. J.**; see Columbia Cellulose Co., Ltd.
- Royce, William A., Jr.**, Vice-Pres.-Plant Mgr., Traverse City Iron Works, Traverse City, Mich. (Jan. '53)
- Rubicam, Jack.**, Sales Repr., Mueller Co., 1439 Burke Ave., N.E., Grand Rapids, Mich. (Apr. '53)
- Ruder, Milton G.**, Asst. Supt., Water Works, Medina County Sewer Dist., No. 1, Chippewa Lake, Ohio (July '53) *MRP*
- Rudolph, Eldras B.**, Service Engr., Builders Providence, Inc., 571 N. Main St., Greensburg, Pa. (Jan. '53)
- Russell, Harold B.**, Cons. Engr., 2716 E. Douglas, Wichita, Kan. (Apr. '53)
- Sadler, Muriel Elaine** (Miss), Chemist, Water Div. Lab., 3B City Hall, Houston 2, Tex. (Jan. '53)
- St. Helens, City of**, of Sexp Morton Jr., Supt. of Public Works, St. Helens, Ore. (Munic. Sv. Sub. Jan. '53)
- St. Laurent, Town of**, Jacques Chagnon, 14 Rue de l'Eglise, St. Laurent, Que. (Munic. Sv. Sub. Jan. '53)
- Sanborn, K. F.**; see Mankato (Kan.)
- Sand Springs Munic. Water Board**, Joe P. Burke, 111 N. Garfield, Sand Springs, Okla. (Munic. Sv. Sub. Jan. '53)
- Sands, Hagen Rudolph**, Supt. of Area 2, Florida Keys Aqueduct Com., Box 366, Islamorada, Fla. (Jan. '53) *M*
- Sanford, City of**, T. P. Watson, City Mgr., Sanford, N.C. (Corp. M. Oct. '49)
- Sarnia Civic Water Works Dept.**, T. H. Dobbin, Comr. of Works, City Hall, Sarnia, Ont. (Corp. M. Apr. '53)
- Sauer, L. C.**, Sewer & Water Main Contractor, 10310 Memorial Dr., Houston, Tex. (Apr. '53) *M*
- Saulson, S.**; see Kahn, Albert, Associated Architects & Engineers, Inc.
- Sawyer, Lloyd E.**, Editor, Engineering & Contract Record, 347 Adelaide St., W., Toronto, Ont. (Apr. '53)
- Saxon, Bert**, Dist. Supt., Water Dept., Municipal Bldg., Oklahoma City, Okla. (Jan. '53)
- Schleicher, William A.**, Engr., E. I. du Pont de Nemours & Co., R.R. 2, Borden, Ind. (Apr. '53) *RP*
- Schmid, George G.**, Engr.-Mgr., Southeastern Oakland County Water Authority, 23646 Woodward Ave., Pleasant Ridge, Mich. (Apr. '53) *MRP*
- Scholz, Henry R.**, Asst. Supt., Office, Water Dept., 255 Main St., White Plains, N.Y. (April. Jan. '41)
- Schooley, Roy W.**, Sales Engr., Rockwell Mfg. Co., 390 N. Lexington Ave., Pittsburgh 8, Pa. (July '53) *M*
- Schoonover, Richard W.**, Service Engr., Inflico, Inc., Box 5033, Tucson, Ariz. (Jan. '53)
- Schulze, E. K.**; see Arabian American Oil Co.
- Schwemler, Frank J.**, Comr. of Water & Heat, City Hall, Cleveland, Ohio (Jan. '53)
- Scott, G. T. G.**, Asst. Engr., Canadian-British Eng. Consultants, 1654 Avenue Rd., Toronto 12, Ont. (Jan. '53)
- Seroogs, B. F., Jr.**; see Harris County (Tex.) Water Control & Improvement Dist. No. 20
- Sees, William E., Jr.**, Cons. Engr., State Chamber of Commerce Bldg., 222 N. 3rd St., Harrisburg, Pa. (Apr. '53) *MRP*
- Seran, Joe**, Supt., Water Works, Box 37, Wewoka, Okla. (Jan. '46)
- Sewell, Joseph M.**, Cons. Engr., 318 N. Main St., Winchester, Ky. (Oct. '52)
- Seymour, Charles**, Water Comr. & Utilities Supt., Madison, Neb. (Apr. '53) *M*
- Shanley, John McCormick**, Hydr. Engr., The Pitometer Co., 50 Church St., New York 7, N.Y. (Oct. '52)
- Sharon, Luke F.**; see Arcade (N.Y.)
- Shaw, Glen A.**, Dist. Repr., Mathieson Chemical Corp., 220 N. 4th St., St. Louis, Mo. (Apr. '53)
- Shaw, Vaughn C.**, Board of Fire Underwriters of the Pacific, 510 S. Spring St., Los Angeles 13, Calif. (Jan. '53)
- Shawnee Township Water Dept.**, John A. Dhooghe, 2151 S. 34th St., Kansas City, Kan. (Corp. M. Oct. '52)
- Shearer, Hugh C.**, Supt., McCrory Water & Sewer Systems, McCrory, Ark. (Apr. '53) *M*
- Shepherd, Willard F.**, Director, Div. of Eng., State Dept. of Health, Lansing 4, Mich. (Jan. '53) *P*
- Shoebottom, T. B.**, San. Engr., Benham Eng. Co., 550 American National Bldg., Oklahoma City, Okla. (Jan. '53) *P*
- Shoemaker, Merhl E.**, Asst. Mgr., Alum Products, Mathieson Chemical Corp., Mathieson Bldg., Baltimore 3, Md. (Apr. '53) *P*
- Shoults, Thurman**; see Oxford (Ind.) Munic. Water Utility
- Shugert, Mary A.** (Miss), Supt., City Water Works, Loogootee, Ind. (Jan. '52)
- Shurtleff, A. I.**, Repr., Rockwell Mfg. Co., 216 S. Jamestown Ave., Tulsa 12, Okla. (Apr. '51)
- Sickel, Allen A.**, Dist. Mgr., Layne-Atlantic Co., Box 1463, Savannah, Ga. (Jan. '53)
- Simon, Herman I.**, Supt., Wyoming Township, 1151 Hudson St., S.W., Grand Rapids, Mich. (Jan. '53)
- Skinner, William R.**, Chem. Engr., E. I. du Pont de Nemours & Co., Box 2027, Orange, Tex. (Jan. '53) *R*
- Skoooglund, C. R.**, City Engr., City Hall, Vancouver, Wash. (Jan. '53)
- Slater, Harold H.**, City Engr., Wooster, Ohio (Apr. '53) *M*
- Sletten, Owen**, Bacteriologist, Coca-Cola Bottling Co. of Minnesota, Inc., 2035 University Ave., N.E., Minneapolis, Minn. (Apr. '53)
- Sly, Edward W.**, 404 N. Palmer Plant, Plant City, Fla. (July '53) *RP*
- Smith, E. D.**; see Montgomery County (Ohio) Sanitation Dept.
- Smith, E. L.**; see Edmonton (Alta.) Power, Water Supply & Purif. Plant
- Smith, Frank L.**; see Modjeska Service Co.
- Smith, H. F.**, Engr., State Water Survey Div., 509 W. Washington, Urbana, Ill. (Apr. '50)
- Smith, Norman F.**, Vice-Pres., International Water Co., Appo. Aereo No. 1519, Cali, Colombia (July '38)
- Smith, Raymond C.**, Service Engr., Builders-Providence, Inc., 1141 Greenleaf Ave., Wilmette, Ill. (Jan. '53) *MP*
- Smith, Robert K.**, Pres., Magnamatic Corp. of America, 425 Soledad, San Antonio, Tex. (Apr. '53) *M*
- Smith, W. Wardlaw**, Partner, C. C. McGowan Co., Box 166, Greer, S.C. (Oct. '52)
- Snell, William**, Supervisor, Water Assessments & Collections, Water Works, 111 City Hall, 200 E. Wells St., Milwaukee, Wis. (Jan. '53) *M*
- Snyder, Charles William**, Public Health Engr., Div. of San. Eng., State Health Dept., 2411 N. Charles St., Baltimore 18, Md. (Jan. '53)
- Solvay, Village of**, Everett W. Lutz, Administrative Supervisor, Water & Light Dept., 3143 Milton Ave., Solvay, N.Y. (Corp. M. Jan. '43)
- Spelman, Paul T.**, Engr., Wyoming Township, 1155—28th St., S.W., Grand Rapids, Mich. (Jan. '53)
- Spencer, Sterling B.**, Operator, City Water Works, Richwood, W.Va. (Jan. '53) *MP*
- Spenski, Henry S.**, Registrar, Water Works Office, City Hall, Grand Rapids, Mich. (Jan. '53) *M*
- Spitzer, Elroy Francis**, City Engr., City Hall, South Milwaukee, Wis. (Jan. '53)

- Spragins, R. W., & Co., R.** Wendell Spragins, 1536 Commerce Title Bldg., Memphis, Tenn. (Corp. M. Oct. '52)
- Spragins, R. Wendell;** see Spragins, R. W., & Co.
- Standler, John F.,** Supt., Water & Sewers, Box 26, Mathis, Tex. (Jan. '53) *MRP*
- Stanley, Donald R.,** Associated Eng. Service, 10250—106 St., Edmonton, Alta. (Jan. '47)
- Stephenson, L. E.,** Owner, L. E. Stephenson Water Service, Brantley, Ala. (July '53) *M*
- Stewart, M. B.,** Sales Engr., Badger Meter Mfg. Co., Shinnstown, W.Va. (Oct. '46)
- Stiehler, Theodore;** see Gas City (Ind.) Water Dept.
- Stitt, L. W., Jr.,** 5124 Chestnut St., Bellaire, Tex. (Jan. '46)
- Stoffeth, Alvin J.,** Asst. Cashier, National City Bank, 2505 Pennsylvania Ave., Evansville, Ind. (Jan. '53)
- Stokes, Hayman W.,** Asst. to Water Engr., City Water Dept., 105 E. Queen St., Inglewood, Calif. (Jan. '53) *M*
- Stokoe, Donald D.,** Civ. Engr., James F. MacLaren Assoc., 705 Yonge St., Toronto, Ont. (Jan. '53) *MRP*
- Stonkey, Robert L.,** Distr. Foreman, Munic. Water Plant, Portland, Ind. (July '53) *M*
- Storey, Alva Theron,** Chem. Technician, Water Works, 1210 Hemphill Ave., N.W., Atlanta, Ga. (Jan. '44)
- Stratton, Lenward G.,** Vice-Pres., Sherwood Water Treatment Co., Inc., Beverly, N.J. (Apr. '53) *MRP*
- Stringer, Alfred E., Jr.,** Asst. Dist. Sales Mgr., Alabama Pipe Co., 122 S. Michigan Ave., Chicago 3, Ill. (Jan. '53)
- Stuart, Frederick E., Jr.,** Chem. Engr., Stuart Corp., 516 N. Charles St., Baltimore 1, Md. (July '53) *P*
- Sturdevant, Carl Eugene,** Asst. Water Supt., City Hall, Orange, Calif. (Oct. '52)
- Sudbury, John Dean,** Sr. Research Chemist, Continental Oil Co., Ponca City, Okla. (Oct. '52)
- Sullivan, Harry I.,** Cons. Engr., 344 E. Carson Blvd., Torrance, Calif. (Apr. '53) *R*
- Supplee, Richard A.,** Asst. Supt., Water Dept., Distr. Div., 29th & Cambria Sts., Philadelphia, Pa. (Apr. '53) *M*
- Sutherland, Jack,** Salesman, Hooker Electro-Chemical Co., Box 1646, Tacoma 1, Wash. (Apr. '53) *MRP*
- Swayzee Water Works, W. E. Kilgore,** Clerk, Swayzee, Ind. (Corp. M. Jan. '53)
- Swets, Donald H.,** San. Engr., Dept. of Public Works, City Hall, Kalamazoo, Mich. (Jan. '53) *MP*
- Sylvester, David G.,** Mech. Engr., Sherman Machine & Iron Works, 26 E. Main, Oklahoma City, Okla. (Apr. '53) *P*
- Taiwan Water Works Assn.,** Liu Pao-Ching, Pres., Water Works, Chiai, Taiwan, China (Corp. M. Jan. '51)
- Taylor, Clyde,** Gen. Foreman, Water Works, 306 W. Main St., Logansport, Ind. (Oct. '51)
- Taylor, James;** see Hillsdale (Mich.) Board of Public Works
- Taylor, W. C.,** Local Mgr., Hoosier Water Co., Mooresville, Ind. (Oct. '51) *MD*
- Teegardin, Hooper J.,** Service Director, Water Dept., R.F.D. No. 2, Columbus Grove, Ohio (July '53) *M*
- Teletzke, Gerald H.,** Hydraulic & San. Lab., Univ. of Wisconsin, Madison, Wis. (Jr. M. Jan. '53) *P*
- Terry, Stephen L.,** Engr., Southwestern Public Service Co., Box 1261, Amarillo, Tex. (Apr. '53) *RP*
- Tesco Chemicals, Inc.,** Frank E. Cooper, Vice-Pres., 1575 Northside Dr., N.W., Atlanta, Ga. (Assoc. M. Jan. '53)
- Thacker, H. H.;** see Martinsville (Ind.) Water Utility
- Thamer, Herbert J.,** Engr., The Pictometer Co., 29th & Cambria Sts., Philadelphia, Pa. (Apr. '53) *M*
- Theln, Peter J.,** Thein Well Co., Clara City, Minn. (Jan. '53) *R*
- Thiele, Heinrich J.,** Ground Water Consultant, 918 Forest Ave., Tempe, Ariz. (Apr. '53)
- Thomas, H. W.,** Manufacturer's Agent, Fred W. Hanks Co., 1414 Shenadoah Dr., Seattle 4, Wash. (Apr. '53) *MRP*
- Thomas, Hugh,** Transite Pipe Engr., Johns-Manville Sales Corp., Merchandise Mart Plaza, Chicago 54, Ill. (Jan. '53)
- Thomas, William Owen,** Gen. Mgr., Arthur Pew Construction Co., 3110 Roswell Rd., Atlanta, Ga. (Jan. '53) *RP*
- Thompson, Fletcher,** Water Plant Supt., Clarksville Light & Water Co., 410 Rogers St., Clarksville, Ark. (Jan. '53) *P*
- Thompson, Horace,** Administrative Asst. to City Mgr., Municipal Bldg., Oklahoma City, Okla. (Apr. '53) *M*
- Tilley, Robert L.,** Chief Engr., Wilsey & Co., 1275 Rollins Rd., Burlingame, Calif. (July '53) *MRP*
- Tinniswood, William W.,** Application Engr., Caskey Eng. Co., 1736—1st Ave., S., Seattle 4, Wash. (Apr. '53) *RP*
- Tjalsma, Dewey R.,** Zeolite Plant Operator, Wyoming Township, 1155—28th St., S.W., Grand Rapids, Mich. (Jan. '53)
- Tohill, Kenneth F.,** Salesman, Mueller Co., 491 N. Shore Dr., Clear Lake, Iowa (Jan. '53) *MR*
- Toomey, John C.,** Dist. Sales Engr., Chain Belt Co., 5050 Joy Rd., Detroit 4, Mich. (Apr. '53)
- Trester, Ralph H.,** Asst. Gen. Mgr., Metropolitan Utilities Dist., Omaha, Neb. (July '53) *M*
- Trlay, Roland, Jr.,** Water Works Planning Engr., Dept. of Water & Power, Box 3669 Terminal Annex, Los Angeles 54, Calif. (Oct. '44)
- Tripp, George L.,** Contractor, 3260 Elizabeth Lake Rd., Pontiac, Mich. (Jan. '53) *M*
- Trites, David W.,** Sales Repr., Western Supply Co., 820 N St., Lincoln, Neb. (Jan. '53) *M*
- Troeller, Henry K.,** Philadelphia Drilling Co., Effort, Pa. (Apr. '53) *R*
- Troske, Leo J.,** Distr. Engr., Water Works, 1101 Monroe Ave., N.W., Grand Rapids, Mich. (Jan. '53) *M*
- Trotter, Herman Eager, Jr.,** B-I-F Industries, 3053 Main St., Buffalo 14, N.Y. (July '53) *MP*
- Truckee Water Co., Inc.,** Woodrow Denney, Maint. Supt., 4801 Cedarvale Ave., Wichita 10, Kan. (Corp. M. Apr. '53)
- Tufford, Norman E.;** see Michigan State College
- Turner, Olen;** see Pleasant Grove Services, Inc.
- Tuttle, James Mason,** San. Engr., Palmer & Baker, Inc., Box 346, Mobile, Ala. (Jan. '53)
- Udell, Howard K.,** Salesman, Mueller Co., 2801 E. 12th St., Los Angeles 23, Calif. (Apr. '53) *R*
- Underwood, Thomas H.,** Gen. Mgr.—Water, Citizens Utilities Co. of California, 1607 Del Paso Blvd., North Sacramento, Calif. (Jan. '53) *MRP*
- Unwin, Harry D.,** Mech. Engr., Albert Kahn Assoc., Inc., 700 Seward Ave., Detroit 2, Mich. (Apr. '53) *RP*
- Upland Water Works, L. C. Lynch,** Supt., Upland, Ind. (Corp. M. Jan. '53)
- Vaars, Howard O.,** Sales Engr., Rockwell Mfg. Co., 2602 Fairfield Pl., Madison 4, Wis. (Jan. '53)
- Van Buskirk, D. E.,** San. Engr., Water Dept., Room 3B, City Hall, Houston, Tex. (Oct. '52)
- Verakas, John P.,** Pres., Verako Products, Inc., Box 604, Waukegan, Ill. (Jan. '53)
- Verdon, John B.,** Sales, American Cyanamid Co., Box 911, Kalamazoo, Mich. (Jan. '53) *P*
- Vey, John A.,** Service Engr., Alan A. Wood, Inc., 4610 N. 15th St., Philadelphia, Pa. (July '53) *MRP*
- Vivian, Harry,** Sanitarian, Houghton-Keweenaw-Baraga Dist. Health Office, Sheldon Ave., Houghton, Mich. (Apr. '53) *RP*
- Voges, Thomas,** Anal. Chemist, Main Lab., Inland Steel Co., Indiana Harbor, Ind. (Jan. '53) *P*
- Volk, William P.,** Salesman, Johns-Manville Sales Corp., Louisville Trust Bldg., Louisville, Ky. (Jan. '53)
- Von Moll, Lawrence C.,** Sales Engr., Henry Pratt Co., 2222 S. Halsted St., Chicago 8, Ill. (Apr. '53) *MRP*
- Waggoner, W. D.,** Water Supt., Box 104, Winters, Tex. (July '53)
- Wakefield, John W.,** 3690 Oak St., Jacksonville 5, Fla. (Jan. '51)

- Waldo, Edward R.**, City Engr., City Hall, Billings, Mont. (Apr. '53) *MP*
- Walker, Douglas C.**, Engr., Metropolitan Water Dist. of Southern California, 306 W. 3rd St., Los Angeles, Calif. (Oct. '52)
- Walker, Harold S.**, Fire Protection Engr., Sixth Naval Dist., U.S.N., Box 365, Naval Base, Charleston, S.C. (Jan. '53) *MR*
- Walker, P. G.**; see Pesticion (B.C.)
- Wallace, Robert D.**, Salesman, American Cyanamid Co., 904 First National Bank Bldg., Cincinnati 2, Ohio (Jan. '53) *P*
- Walsh, Earl S.**; see Oneonta (N.Y.) Dept. of Public Service
- Walsh, Stanley M.**, Gen. Mgr., Boise Water Corp., Box 548, Boise, Idaho (Jan. '53) *M*
- Ward, Arthur G.**, City Engr., Box 582, Shelton, Wash. (Apr. '53) *MRP*
- Ward, Frank Lee**, Supt. of Water Works, Asheboro, N.C. (Oct. '52)
- Ward, Royal V.**, Asst. Engr., San Bernardino County Flood Control Dist., 115 E. 6th St., San Bernardino, Calif. (Jan. '53)
- Watson, Gordon L.**; see Huntington (Ind.) Water Works
- Watson, T. P.**; see Sanford (N.C.)
- Webb, Jack L.**, Civ. Engr., Black & Veatch, Cons. Engrs., 4706 Broadway, Kansas City, Mo. (Jan. '53) *MRP*
- Weber, Roy E.**, San. Engr., Box 1891, West Palm Beach, Fla. (July '49)
- Weems, William J.**, Supt., Water Dept., Municipal Bldg., Temple, Tex. (Oct. '49)
- Welble, Arnold P.**; see Fraser Cement Products Co.
- Weihe, Alvin C.**, Supt. Water & Elec. Utilities, Delano, Minn. (Jan. '53) *M*
- Weir, F. Morley**, Div. Engr., Wallace & Tiernan Co., 2180 Palou St., San Francisco 24, Calif. (July '46)
- Welch, Edward B.**, Dist. Mgr., National Aluminate Corp., 516 —10th Ave., N., Jacksonville Beach, Fla. (Jan. '53) *P*
- Wendt, William C. R.**, Project Engr., Dept. of Water & Sewers, Box 316, Coconut Grove Station, Miami 33, Fla. (Jan. '53) *M*
- West Alexandria Board of Public Affairs**, Roy E. Hoops, Chief Engr., Water Plant, West Alexandria, Ohio (Munic. Sv. Sub. Oct. '52)
- West Miami Water Board**, H. N. Buchner, Town Clerk, 901 S. E. 62nd Ave., Miami 44, Fla. (Munic. Sv. Sub. Apr. '53)
- Weston Public Utilities Com.**, V. G. Bussey, Secy.-Treas., 131 Main St., N., Weston, Ont. (Corp. M. Jan. '53)
- Westfield, Village of**, Joseph T. Howson, Supt., Westfield, N.Y. (Munic. Sv. Sub. Jan. '53)
- Wheeler, R. S. J.**, Supervising Civ. Engr., Humble Pipe Line Co., Drawer 2220, Houston 1, Tex. (Jan. '53) *MRP*
- White, J. B.**, Water Works Supt., Madisonville, Tex. (Apr. '53)
- White, Jack W.**, San Jose Hills Water Co., 16340 E. Maple Grove, Puente, Calif. (Jan. '53) *M*
- White, Norman L.**, Director, Mira Loma Mutual Water Co., 1746 Pasadena Glen Rd., Pasadena 8, Calif. (Apr. '53) *MP*
- Whitehead, Culbreath, Jr.**, Engr., Culbreath Whitehead Co., 1334 Manatee Ave., Bradenton, Fla. (Jan. '53) *P*
- Wiedenhofer, Edgar Paul**, Prof. of Civ. Eng., Michigan College of Mining & Technology, 1305 Ruby Ave., Houghton, Mich. (Jan. '53)
- Wilcox, Arnold L.**, Sales Engr., The Dorr Co., 116 Washington Ave., Westport, Conn. (Apr. '53) *P*
- Wilke, Stephen J.**, Service Engr., Builders-Providence, Inc., 9F Lewis Village, Greenville, S.C. (Oct. '52)
- Willard, Jack**, Constr. Supt., Water Works Dept., Evansville, Ind. (Jan. '53)
- Willumson, Donald Herbert**, Div. Engr., California Water & Telephone Co., 2116 Huntington Dr., San Marino, Calif. (Oct. '52)
- Wilson, Robert W.**; see Pennsylvania Drilling Co.
- Winick, J. E.**, Mgr., Plastic Products Div., Triangle Conduit & Cable Co., Inc., Box 711, New Brunswick, N.J. (Apr. '53) *P*
- Winter, Albert B.**, Salesman, Transite Pipe, Johns-Manville Sales Corp., 19 W. 38th St., Indianapolis, Ind. (Jan. '53)
- Winters, Kenneth G.**; see Grand Island (N.Y.)
- Wiseman, John W.**, Chief Engr., Fort Worth Air Terminal, Inc., International Airport, Fort Worth, Tex. (Jan. '53) *M*
- Wisneski, Charles**; see New Haven (Ind.) Water Works
- Wolfenson, Louis B.**, Graduate Student, Univ. of Oklahoma, 732 S. Lahoma, Norman, Okla. (Jan. '53) *MRP*
- Wood, Edna Damaris**, (Miss), Chief San. Chemist, Water Div. Lab., City Hall, Houston, Tex. (Jan. '53)
- Woodall, Beamon W.**, Filter Plant Foreman, City of Phoenix, Scottsdale, Ariz. (Jan. '53)
- Woodall, Luke**, Sales Engr., Industrial Supply Corp., Box 5116, Tampa 5, Fla. (Jan. '46)
- Woodman, Herbert Stevens**, Mgr., Filtration Div., Francis Hankin Co., Ltd., 2022 Union Ave., Montreal, Que. (Oct. '52)
- Woodstock, Town of**, J. R. Calkin, Town Mgr., Woodstock, N.B. (Corp. M. Jan. '53)
- Woodward, Walter L.**, Cons. Engr., Empire State Bldg., Spokane, Wash. (Oct. '52)
- Wooten, Louis E., Jr.**, Vice-Pres., L. E. Wooten & Co., Box 2984, Raleigh, N.C. (Oct. '52)
- Wright, J. O.**, Pres., Badger Meter Mfg. Co., 2371 N. 30th St., Milwaukee, Wis. (Jan. '53)
- Wright, James E., Jr.**, Owner-Mgr., James E. Wright Jr., Box 946, Indio, Calif. (Jan. '53) *MRP*
- Wright, Scott**; see Greenville (Tex.)
- Yackey, Harold H.**, Constr. Supt., San Jose Hills Water Co., 16340 E. Maplegrove Ave., Puente, Calif. (Apr. '53) *MR*
- Yamamoto, James G.**, Asst. Designer, Board of Water Comrs., City & County Bldg., Denver, Colo. (Jan. '53) *MRP*
- Yapuncich, John G.**, Director of Lab., Yapuncich-Sanderson Labs., Box 593, Billings, Mont. (Apr. '53) *P*
- Yassuda, Eduardo Riomey**, Assoc. Prof., Faculdade de Higiene e Saude Publica, Caixa Postal 8099, Sao Paulo, Brazil (Jan. '53) *MRP*
- Yonker, G. J.**, Salesman, Mueller Co., 1729 N. Edward St., Decatur, Ill. (Jan. '53)
- Young, Charles W.**, Chairman, Northampton Borough Munic. Authority, 1717 Main St., Northampton, Pa. (Jan. '53) *M*
- Young, Ernest F.**, Water Works Engr., Public Works Dept., Brockman Rd., Kuala Lumpur, Malaya (Apr. '53) *MP*
- Young, Kenneth**, Gen. Supt., Constr., Metropolitan Utilities Dist., 18th & Harney, Omaha, Neb. (Jan. '41) *M*
- Zenthoef, Carl N.**, Water Works Dept., Evansville, Ind. (Jan. '53)
- Ziebell, Herman**, Herman Ziebell Supply Co., 929 St. James Pl., Park Ridge, Ill. (Jan. '53)
- Zimmerman, James E.**, Filter Plant Engr., 405 N. Highland St., Pittsburg, Kan. (Jan. '53)

AMERICAN WATER WORKS ASSOCIATION

Code of Practice

As one engaged in providing public water supply for the people whom I serve and as a member of the American Water Works Association, I hold to these principles:

- 1** To the best of my ability I shall conduct all operations under my control in such manner as will, as far as the means made available permit, provide adequate water service, preserve the public health and furnish protection to property.
- 2** I shall consider that in performing this service I am required at all times to act within the bounds of local, state and national law and within the field of orderly procedure among free men.
- 3** I shall, therefore, extend my own fund of technical and professional information to the end that the procedures which I advocate are based upon well grounded information.
- 4** In every legitimate manner, I shall encourage the construction of water works structures, the use of materials, as well as management practices and operating procedures, which are economically sound and in the public interest.
- 5** I shall at all times discourage exaggerated, unfair or untrue statements concerning any operation or material connected with public water supply. In conformance with this principle, I shall endeavor to assist my associates as well as the public in obtaining a correct understanding of water works operations and materials.

- 6 I shall not accept any remuneration or benefit from any interested party other than my employer or my client. Neither shall I accept any collateral employment which might in any degree adversely affect my performance of my duties or obligations to my regular employer or client.
- 7 If I have a financial or personal interest in any invention, apparatus, device or procedure, which may be offered for sale to, or considered for purchase by, my employer or my client, I shall disclose that interest fully and shall participate in no decision related to its purchase or use by that employer or client.
- 8 I hold to the opinion that honorable competition for advancement and for opportunity to render more responsible service is an essential part of democratic civilization—upon which rests real improvement and progress. But I shall not permit my own ambition for advancement to cause me to act unfairly toward others associated with me.
- 9 I shall by all legitimate and reasonable means strive to improve the public appreciation of the services rendered by myself and my associates—to the end that employment in the public water supply field is recognized by all as a legitimate and lifetime career for well trained and industrious citizens.
- 10 I shall not, as an incident related to discussions of rates of pay or conditions of employment, suspend or fail to perform the duties entrusted to me, nor permit water service to fail the citizens who depend on me. I shall, having associated myself with public water supply operations, hold the public interest superior to my personal interests and I shall by my acts and by my leadership see to it that water service is maintained under both normal and emergency conditions.

In short, I understand my obligations to my community and having accepted responsibilities upon which depend public health and safety, I shall not fail.

DIRECTORY OF CONSULTANTS

All AWWA members who claimed consulting activity in one of several branches of activity, and who listed some clients by whom they had recently been retained, have been included in the directory. None of these references has been investigated by the Association, however.

Individuals are cross-referenced to the firms with which they are associated, and company names are printed in boldface type. When the firm takes its name from an individual, the name appears in boldface. Listings are geographic by states, and an asterisk preceding a name indicates that the individual so distinguished is a registered professional engineer in the state under which the listing appears. Permanent branch offices have been listed only when staffed by AWWA members.

The italic letters following the address of a firm indicate the type of work done, in accordance with the key given below. All the activities denoted by each code letter are not necessarily performed by each firm so designated, however, as it has not proved practicable to break down the listings to distinguish specialization or limited activity within the various

major fields. The code should therefore be accepted, with reservations, as a general guide only. Additional activities not considered to be of primary interest to those in the water supply and closely allied fields are omitted.

Key to Symbols

- A*—General civil engineering, design, construction, operation or maintenance
- B*—Sanitary engineering, municipal and industrial water treatment, sewerage or drainage
- C*—Appraisal, valuation or inspection
- D*—Chemistry, chemical engineering or bacteriology
- E*—Geology or ground water
- F*—Hydrology
- G*—Hydraulics, distribution system studies
- H*—Irrigation
- J*—Electrical engineering
- K*—Mechanical engineering
- L*—Accounting
- M*—Other (not ordinarily identified)
- *—Registered as a professional engineer in the state under which the listing appears

ALABAMA

- *Converse, J. B. & Co., 106 St. Joseph St., Mobile *ABGJK*
- *Crockett, Vernon P., 102 Montgomery Ave., Sheffield *ABC*
- *Gilmer, W. L.; see Polglaze & Basenberg
- *Goodwin, J. W., Eng. Co., 2111 7th Ave. S., Birmingham *ABCG*
- *Hendon, Harry H.; see Polk, Powell & Hendon
- Krebs, Paul B.; see Polglaze & Basenberg
- Ladd Eng. Co., *E. J. Ladd, Box 66, Fort Payne *ABCJK*
- *Mills, Donald, Box 534, Selma *B*
- Moore, Thomas E.; see J. W. Goodwin Eng. Co.
- *O'Toole, J. E., Eng. Co., 316-17 Watt Bldg., Birmingham *AB*
- Polglaze & Basenberg, 812 S. 27th St., Birmingham *5 BCG*
- Polk, Powell & Hendon, 620 Stallings Bldg., Birmingham *AB*
- Strickland & Assoc., *Raymond E. Strickland Jr., 2129 7th Ave. N., Birmingham *3 ABK*
- *Taylor, Alex O., Box 69-119, Cedar Crest Dr., Auburn *B*
- *Watford, Troy E., & Assoc., Box 661, Gadsden *ABCG*

ARIZONA

- Blanton & Cole, 155 W. Pennington, Tucson *ABCG*
- *Carollo, John A.; see Headman, Ferguson & Carollo
- *Fitch, Reamy C., & Assoc., Box 1222, Phoenix *ABCGK*
- *Gardner, Leigh O.; see Yost & Gardner Engrs.
- Headman, Ferguson & Carollo, 3308 N. 3rd St., Phoenix *BG*

- Stufflebean, John H.; see Blanton & Cole
- *Thiele, Heinrich J., 918 Forest Ave., Tempe *EFM*
- Yost & Gardner Engrs., *Harold W. Yost, 508 Heard Bldg., Phoenix *ABCEGH*

ARKANSAS

- Bituminous Sampling & Eng. Co., Box 222, El Dorado *ABCH*
- Blaylock & Zander, 509 E. Markham, Little Rock *ABFGJK*
- Dickinson & White, W. Dewoody Dickinson, 115 N. Spring St., Little Rock *ABC*
- Fricke & Kazmann, Stuttgart *EFGH*
- *Henry, L. A.; see Southwest Eng. Co.
- *Kazman, Raphael G.; see Fricke & Kazmann

Lefever, K. W., *Kenneth W. Lefever, 401 Victory St., Little Rock *ABCFG*

*McGoodwin, L. M.; see Sullivan & McGoodwin

*Mehlbürger, Max A., 1021 Pyramid Bldg., Little Rock *ABCG*

*Methvin, F. M.; see Bituminous Sampling & Eng. Co.

Southwest Eng. Co., 320 W. 9th St., Little Rock *ABCK*

Sullivan & McGoodwin, Goshen Rd., Fayetteville *BG*

Van Trump Testing Lab., *Roderrick Van Trump, 219 Terminal Warehouse Bldg., Little Rock *CD*

*Zander, Paul Martin; see Blaylock & Zander

CALIFORNIA

*Adams, Walter F., 15 Dougherty-Shea Bldg., Santa Rosa *ABH*

*Alderman, Frank E., 203 Rialto Theatre Bldg., 1520 Oxley St., South Pasadena *ABCFG*

Arnold, William L., Box 316, San Gabriel *L*

*Baker, Donald M.; see Ruscardon Engrs.

*Bard, Thomas G., 2924 Paseo Tranquillo, Santa Barbara *AGH*

*Blakeley, Loren E., Association Lab. Bldg., 1815 W. Chapman Ave., Orange *BEFH*

*Bovard, Paul F., 156 Spear St., San Francisco 5 *BEF*

*Bowen, Edward R., 475 Huntington Dr., San Marino 9 *ACEFGHL*

Brown & Caldwell, *Kenneth W. Brown, 90 Mint St., San Francisco *ABDG*

Browning, C. R., 455 W. 3rd St., Tustin *AEH*

*Bulot, Francis H., 1041 E. Green St., Pasadena *ABC*

Caldwell, David H.; see Brown & Caldwell

*Clark, Everett L., 1004 A. G. Bartlett Bldg., 215 W. 7th St., Los Angeles 14 *ACEFGH*

Conkling, Harold, 448 S. Hill St., Los Angeles 13 *EF*

Dames & Moore, 816 W. 5th St., Los Angeles *E*

*Davis, Don C., 116 Repplier Rd., Banning *AC*

Downey, James J.; see Water Resource Development & Eng. Co.

*Eckart, Nelson A., 11-15th Ave., San Francisco *AC*

Engineering Service Corp., 1127 W. Washington Blvd., Los Angeles *AB*

Gardner, Dion Lowell, c/o Association Labs., 1815 W. Chapman, Orange *E*

*Gotans, Harold B., 175 The Up-lands, Berkeley 5 *BF*

*Gray, Harold Farnsworth, 2540 Benvenue Ave., Berkeley 4 *B*

*Gregory, John S., Co., 152 E. Glenarm St., Pasadena 2 *ABFGH*

*Hawksley, Ray W., Co., 320 Market St., San Francisco 11 *BD*

Helm, Ralph B., 215 W. 7th St., Los Angeles 14 *M*

*Hill, Raymond A.; see Leeds, Hill & Jewett

Holladay & Westcott, 5384 Huntington Dr., Los Angeles 32 *BK*

Hostrup, Lyons & Assoc., *C. F. Hostrup, 9526 W. Pico Blvd., Los Angeles *ABCEFG*

*Hunter, Thomas B., Rm. 710, 41 Sutter St., San Francisco *CGJK*

Hurlbut, William W., 167 S. Mansfield Ave., Los Angeles *ABCEFGH*

*Hyde, Charles Gilman, 2495 Shattuck Ave., Berkeley 4 *BFG*

Jamison, J. H.; see Utilities Service Co.

*Jeffreys, C. E. P.; see Truesdall Labs., Inc.

*Jenks, Harry N., 63 Crescent Dr., Palo Alto *B*

*Jessup, Albert H., 224 N. Segovia Ave., San Gabriel *BKG*

*Johnson, Owen; see Water Chemists, Inc.

*Jorgensen, Homer W., 315 Downey St., Modesto *B*

Kennedy, Clyde C., Atlas Bldg., 604 Mission St., San Francisco 5 *ABCEFGH*

*Kennedy, Richard R.; see Clyde C. Kennedy

*Kennedy, Robert M.; see Clyde C. Kennedy

Kingman, Dean S.; see L. Cedric Macabee

*Kingsbury, William Carter, 844 Manhattan Beach Blvd., Manhattan Beach *ABGHK*

Lee, Charles H., 58 Sutter St., San Francisco 4 *BEFGH*

Leeds, Hill & Jewett, 601 W. 5th St., Suite 1000, Los Angeles *ACEFGH*

*Longwell, John S., 405-14th St., Oakland 12 *ABCEFGH*

*Luthin, John C., 1113 Laurent St., Santa Cruz *ACGL*

Macabee, L. Cedric, 156 University Ave., Palo Alto *ABCEFGH*

*Montgomery, James M., 15 N. Oakland Ave., Pasadena 1 *ABCEFGHJKL*

Mylander, Harvey A., 603 Grand Ave., South Pasadena *AFJK*

*Neill, Clayton B., Carmel *ABCL*

*Newville, J. R.; see Eng. Service Corp.

Nordmann, Joseph B.; see Pacific Chemical Consultants

Norgaard, John T.; see Brown & Caldwell

*O'Connell, W. J., & Assoc., 1214 Burlingame Ave., Burlingame *ABDM*

*O'Neill, Ralph W., 1734 Cleveland Rd., Glendale 2 *ABCEFGHM*

Pacific Chemical Consultants, 14155 & 14203 Bessemer St., Van Nuys *DE*

Perliter & Soring, *Simon Perliter, 448 S. Hill St., Los Angeles 13 *ABGJK*

Pomeroy & Assoc., Richard Pomeroy, 660 S. Fair Oaks Ave., Pasadena 2 *BD*

*Rankin, Carl R., 180 S. Orange Grove Ave., Pasadena *ACG*

*Reynolds, Leon B., Rm. 275, Stanford Univ. *B*

*Robinson, Milton C., 6155 S. Eastern Ave., Los Angeles 22 *BCDGRM*

Ruscardon Engrs., 448 S. Hill St., Los Angeles 13 *ACEFGH*

*Savio, Aldo P.; see Mark Thomas & Co.

*Seobey, Fred C., 1063 Euclid Ave., Berkeley 8 *BGH*

Sonderegger, A. L., 448 S. Hill St., Los Angeles 13 *EFGH*

Stickel, John F., Jr.; see Dames & Moore

Thomas, Mark, & Co., 18 N. San Pedro St., San Jose *AG*

Truesdall Labs., Inc., 4101 N. Figueroa St., Los Angeles 65 *BD*

Utilities Service Co., 463 S. Bascom Ave., San Jose

Water Chemists, Inc., 1700 S. Main St., Los Angeles 15 *M*

*Wescott, Ralph M.; see Holladay & Wescott

*Wilson, Carl, 112 W. 9th St., Los Angeles 15 *D*

COLORADO

Beck, R. W., & Assoc., 225A Independence Bldg., Colorado Springs *ABCEFGK*

Blackburn Eng. Co., 111 E. 5th St., Box 369, Pueblo *AGH*

*Elliot, Simon F.; see Blackburn Eng. Co.

*Fuller, A. S., 4655 Vance St., Wheatridge

Gossett, O. C., 5510 Wadsworth, Arvada *EHM*

*Hoper, C. H.; see R. W. Beck & Assoc.

*Howe, Ben V.; see Ripple & Howe

*Lefler, R. E., 1275-28th St., Boulder *AB*

Ripple & Howe, *Oliver J. Ripple, 833-23rd St., Denver 5 *ABCEFGH*

Runyan, Damon, 6915 Lakewood P., Denver 15 *ABCGHM*

*Ryan, Alfred J., 1340 Glenarm P., Denver *ABGH*

*Vaseen, V. A.; see Ripple & Howe

CONNECTICUT

Blair, Clarence, Assoc., Inc., Box 236, New Haven 2 *BG*

*Brown, Roger C.; see Clarence Blair Assoc., Inc.

*Griswold, Harold W., 95 Huntington St., Hartford 5 *ABCG*

*Lefler, William S., Engrs., Associated, 20 Woodland Dr., Noroton

Newlands, James A.; see Henry Souther Eng. Co.

Rudd, E. Irvine; see William S. Lefler Engrs. Associated

Souther, Henry, Eng. Co., 11 Laurel St., Hartford 6 *BDG*

*Tarleton, Ellis A., 34 Pleasant St., Danbury *BD*

DISTRICT OF COLUMBIA

Wilberding Co., Inc., *M. X. Wilberding, 1822 Eye St., N. W. *ABCK*

FLORIDA

- Bardwell, R. C.**, Box 151, Mount Dora *ABD*
Birchall, Arthur J.; see Smith & Gillespie
Black, A. P.; see Black Labs., Inc.
Black Labs., Inc., *Charles A. Black, 700 S. E. 3rd St., Gainesville *ABDEFG*
Borden, Benj. F., Jr.; see Smith & Gillespie
Briley, Wild & Assoc., *Harold D. Briley, 8 N. Wild Olive, Box 3052, Daytona Beach *ABCG*
Crow, William B.; see Black Labs., Inc.
Eidness, Frederic A.; see Black Labs., Inc.
Flood, John H., Jr.; see Reynolds, Smith & Hills
Gillespie, Wylie W.; see Smith & Gillespie
Greenleaf, John W., Jr.; see Rader Eng. Co.
Kononoff, Alexis B., 620 N. W. 32nd St., Miami 37 *ABCJK*
O'Neill, Albert E., 510 Rugby Ave., Orlando *ABG*
Parks, Walter J., Jr., see Reynolds, Smith & Hills
Philpott, J. H., 631 E. Sunrise Blvd., Fort Lauderdale *ABG*
Rader Eng. Co., *Earle M. Rader, 111 N. E. 2nd Ave., Miami *ABCEFGHIK*
Reynolds, Smith & Hills, Box 4817, Jacksonville *ABGJK*
Richheimer, Charles R.; see Reynolds, Smith & Hills
Smith & Gillespie, *W. Austin Smith, Box 1048, Jacksonville *ABCEFGJKM*
Snow, Bayard F.; see Rader Eng. Co.
Southern Analytical Lab., Box 628, Jacksonville 1 *AD*
Sydow, William, 2376 Southwest 21st St., Miami 45 *ABGJK*
Telfair, John S., Jr.; see Smith & Gillespie
Walker, Robert E.; see Smith & Gillespie
Weaver, Allen Joseph; see Southern Analytical Lab.
Wild, Harry E.; see Briley, Wild & Assoc.

GEORGIA

- Harte, John J., Co.**, 234 Techwood Dr., N. W., Atlanta *ABDGJK*
Hicklin, R. G.; see Robert & Co. Assoc.
Patchen & Zimmerman, 525 Telfair St., Augusta *ABGJK*
Robert & Co. Assoc., 96 Poplar St., N. W., Atlanta *ABCG*
Roberts, James Moran; see Robert & Co. Assoc.
Wiedeman & Singleton, *H. F. Wiedeman, 1303 Citizens & Southern National Bank Bldg., Box 1878, Atlanta 1 *BCG*
Zimmerman, H. F.; see Patchen & Zimmerman

IDAHO

- Briggs, Raymond J., & Assoc.**, Briggs Eng. Bldg., 619 Grove St., Boise *ABCHK*
Butler, T. C., Jr., & Assoc., 3015 Apple St., Route 5, Boise *ABCEFGHK*

ILLINOIS

- Alvord, Burdick & Howson**, 20 N. Wacker Dr., Chicago 6 *BCEFG*
Baxter & Woodman, *Richard M. Baxter, 123 N. Williams St., Crystal Lake *AB*
Bays, Carl A., & Assoc., Inc., *Carl A. Bays, Box 189, Urbana *ACEFIM*
Behrman, A. S., 9 S. Clinton St., Chicago 6 *BD*
Bird, Cyrus R.; see The Pitometer Co.
Boulahanis, Aggie J., & Assoc., 44 W. 113th St., Chicago 28 *BCG*
Burdick, Charles B.; see Alvord, Burdick & Howson
Casler & Stapleton, 313½ W. State St., Jacksonville *ABCGJ*
Clarke, Samuel M.; see Greeley & Hansen
Consoer, Townsend & Assoc., Arthur Wardell Consoer, 351 E. Ohio St., Chicago 11 *ABCEG*
Crawford, Murphy & Tilly, *L. K. Crawford, 400½ E. Adams, Springfield *ABCEFG*
DeLeuw, Cather & Co., *Charles E. DeLeuw, 150 N. Wacker Dr., Chicago 6 *ABCGJK*
Deuchler, Walter F., Co., 63 S. LaSalle St., Aurora *ABCEG*
Engineering Service Corp., Decatur Club Bldg., Decatur *AB*
Farnsworth & Conley, *George L. Farnsworth Jr., 314 Unity Bldg., Bloomington *ABC*
French, Dudley K., 503 Hawthorn Lane, Winnetka *BD*
Fulkman, John A.; see Consoer, Townsend & Assoc.
Gamet, Merrill B., Prof. of Civ. Eng., Northwestern Technological Inst., Evanston *BG*
Gardner, J. R.; see Warren & Van Praag
Greeley & Hansen, *Samuel A. Greeley, 220 S. State St., Chicago 4 *ABCEG*
Harris, T. R.; see Engineering Service Corp.
Hatfield, William Durrell, 249 Linden Ave., Decatur *AD*
Hill, Kenneth V.; see Greeley & Hansen
Hooper, William T., Jr., 804 Belvidere St., Waukegan *AB*
Howson, L. R.; see Alvord, Burdick & Howson
Hunt, Robert W., Co., 175 W. Jackson Blvd., Chicago 4 *C*
Hyatt, Chauncey A., 5555 Sheridan Rd., Chicago *BCD*
Jewell, K. Austin, 2125½ Ridge Ave., Evanston *BDEFGH*
Langdon, Paul E.; see Greeley & Hansen

- Miller Eng. Service**, *Lavern A. Miller, Box 206, Streator *AB*
Mohliman, F. W., 910 S. Michigan Ave., Chicago
Moore, Vail H.; see Warren & Van Praag, Inc.
Mulford Eng. Service, *James E. Mulford, 33 W. 16th St., Chicago Heights *B*
Niles, Thomas M.; see Greeley & Hansen
Pitometer Co., The, 122 S. Michigan Ave., Chicago *H*
Stapleton, Kenneth K.; see Casler & Stapleton
Thacker Eng. Office, *Richard L. Thacker, 226 Washington St., Waukegan *ABG*
Van Praag, Alex, Jr.; see Warren & Van Praag, Inc.
Warren & Van Praag, Inc., 253 S. Park St., Decatur *ABCFG*
Wilson & Anderson, *Ralph D. Wilson, Box 427, Champaign *A*

INDIANA

- Adams, C. D.**, Box 307, New Albany *BDG*
Ammerman, Davis & Stout, 912-923 K of P Bldg., Indianapolis *BCGJK*
Benson, W. F., Assoc., 911 Massachusetts Ave., Indianapolis *D*
Bessozi, Leo, & Assoc., 312-316 Hammond Bldg., 5217 Hohman Ave., Hammond *ABCDGJK*
Buck, Ross J., 501 E. Main Cross St., Edinburg *B*
Carter, Earl L., 910 Electric Bldg., Indianapolis 4 *C*
Couch, L. I., Co., Inc., 230 E. Ohio St., Indianapolis 4 *ABG*
Davis, Telford Ross; see Ammerman, Davis & Stout
Gordon, Jack; see Clyde E. Williams & Assoc.
Kleiser, Paul J., & Assoc., 671 Tippecanoe St., Terre Haute *ABCEG*
Lennox & Matthews & Assoc., Inc., 644 E. 38th St., Indianapolis 5 *B/KM*
Matthews, J. C.; see Lennox & Matthews & Assoc., Inc.
Phelps, Boyd E., Inc., 1000 Washington St., Michigan City *ABCGJK*
Snyder, McLellan, Rhoads & Watson, *C. L. Snyder, Hillsboro *BL*
Steege, Henry B., & Assoc., 2331 N. Meridian St., Box 5052 Station A, Indianapolis *B*
Williams, Clyde E., & Assoc., *Clyde E. Williams, 312 W. Colfax Ave., South Bend 1 *ABC*
Wilson, J. B., 524 K of P Bldg., Indianapolis 4 *B*

IOWA

- Green, Howard R., Co.**, Reber Bldg., Cedar Rapids *ABCEDEGM*
Hinman, Jack J., Jr., 121 Melrose Ave., Iowa City *ABCD*
Patera Eng., Inc., *Edward L. Patera, 623 Royal Union Bldg., Des Moines *ABCEGJK*
Smith, H. S.; see Stanley Eng. Co.
Stanley Eng. Co., Hershey Bldg., Muscatine *ABCGJK*

KANSAS

- *Bartlett, H. B.; see Paden & Bartlett
 Brink & Dunwoody, Register Bldg., Iola AB
 *Dunwoody, G. A.; see Brink & Dunwoody
 Ediger Eng. Co., *Olin O. Ediger, Box 145, Wichita AB
 Fent, O. S., Box 477, Salina E
 *Hunter, H. R., 313 E. 3rd St., Wichita 2 ABCG
 Paden & Bartlett, 338 New England Bldg., Topeka ABJ
 *Reeves, Robert C.; see Truman Schlup
 Schlup, Truman, 1401 Fairfax Trafficway, Kansas City 15 ABG
 Servis & Van Doren, 409 Crawford Bldg., Topeka ABF
 *Van Doren, L. M.; see Servis & Van Doren
 Wilson & Co., *Murray A. Wilson, Box 937, Salina ABCFGJKM

KENTUCKY

- Bell, Grant S.; see Howard K. Bell
 Bell, Howard K., 553 S. Limestone St., Lexington BCG
 *Hopkin, W. Howard, 136 Breckinridge Lane, St. Matthews ABC
 *Latham, James K.; see Howard K. Bell
 *Mason, Clyde P., 507 Lafayette Ave., Lexington ABG
 *Miller, Maurice L., 205 S. Floyd St., Louisville BCEFGH
 *Sherrill, Miles O., 1412 Bardstown Rd., Box 96 Baxter Ave. Station, Louisville 4 ABCDEFGH
 *Watkins, J. Stephen, 251 E. High St., Lexington ABCFG

LOUISIANA

- Carnegie & Smith, *S. Steve Carnegie, 3000-A Dalrymple Dr., Baton Rouge ABCG
 *Freeman, E. M., & Assoc., Continental American Bank Bldg., Shreveport AB
 Fromherz Engrs., *Frank C. Fromherz, 8233 Poydras St., New Orleans ABCG
 Porter, Barry & Assoc., *Earl Porter, 1730 Main St., Baton Rouge ABCG
 *Ricketts, H. P.; see Porter, Barry & Assoc.

MAINE

- *Clark, Horace L., Saco Rd., Alfred ABCG

MARYLAND

- Beavin, Benjamin Everett, Sr., 621 Chestnut Ave., Towson, Baltimore 4
 *Cassedy, Thomas S.; see Whitman, Requaardt & Assoc.
 *Fuhrman, Ralph E., Beall Hill Rd., Waldorf AB
 *Hitchcock, George Marshall, Lake Gordon, R.D. 3, Cumberland AC DK

- *Powell, Sheppard T., 330 N. Charles St., Baltimore 1 BDEK
 *Regester, Robert T., Baltimore Life Bldg., Baltimore 1 ABCFGK
 *Regnier, Raymond C.; see Whitman, Requaardt & Assoc.
 *Requaardt, Gustav J.; see Whitman, Requaardt & Assoc.
 *Ritter, Roy H.; see Whitman, Requaardt & Assoc.
 Vollmer, A. Russell; see Whitman, Requaardt & Assoc.
 Whitman, Requaardt & Assoc., *Ezra B. Whitman, 1304 St. Paul St., Baltimore 2 ABCFGJK
 *Wolman, Abel, 203 Whitehead Bldg., Johns Hopkins Univ., Baltimore 18 BF

MASSACHUSETTS

- *Bogren, George G.; see Weston & Sampson
 Camp, Dresser & McKee, *Thomas K. Camp, 6 Beacon St., Boston 8 BCFG
 *Chase, E. Sherman; see Metcalf & Eddy
 Coffin & Richardson, Inc., *George W. Coffin, 68 Devonshire St., Boston 9 ABCEG
 Eliassen, Rolf, 77 Massachusetts Ave., Cambridge 39 B
 *Fair, Gordon M., Pierce Hall, Harvard Univ., Cambridge 38 BFG
 Fay, Spofford & Thorndike, 11 Beacon St., Boston BC
 Horne, Ralph W.; see Fay, Spofford & Thorndike
 *Howard, Paul F.; see Whitman & Howard
 Ionics, Inc., 152 6th St., Cambridge 42 DM
 Katz, William E.; see Ionics, Inc.
 *McDonnell, George H.; see Tighe & Bond
 McKee, J. E.; see Camp, Dresser & McKee
 Metcalf & Eddy, 1300 Statler Bldg., Boston B
 Moore, Edward W., 223 Pierce Hall, Harvard Univ., Cambridge 38 BD
 *Root, Darrell A.; see Camp, Dresser & McKee
 Sampson, George A.; see Weston & Sampson
 Shaw, Arthur L.; see Metcalf & Eddy
 Tighe & Bond, 189 High St., Holyoke BEFG
 Weston & Morgenroth, Inc., *Arthur D. Weston, Old South Bldg., 294 Washington St., Boston EFG
 Weston & Sampson, 14 Beacon St., Boston 8 ABCDEFG
 Whitman & Howard, 89 Broad St., Boston ABCG

MICHIGAN

- Ayres, Lewis, Norris & May, *Louis E. Ayres, 500 Wolverine Bldg., Ann Arbor BGJ
 Drury, McNamee & Porter, 306 State Savings Bank Bldg., Ann Arbor ABCEFG
 Eldred, Norman O., 508 Draper St., Vicksburg ABC

- Francis Eng. Co., The, *G. W. Francis, 301-305 Eddy Bldg., Saginaw ABCEFGK
 Hamilton, Weeber & Ward, 356 Houseman Bldg., Grand Rapids 2 ABGK
 *Hirn, W. C.; see Pate & Hirn
 Hubbell, Roth & Clark, Inc., *George E. Hubbell, 2640 Buhl Bldg., Detroit ABG
 Hulbert, Roberts, 680 W. Brown St., Birmingham BD
 Jones, Jesse H., & Assoc., Saint Johns BD
 *Lenderink, Andrew, 221 Commerce Bldg., Kalamazoo 12 AB
 McMahon Eng. Co., John J. McMahon, 13948 Charlevoix, Detroit 15 AM
 *McNamee, Robert L.; see Drury, McNamee & Porter
 *Norton, John C., & Assoc., 415 5th St., Traverse City ABG
 *Orr, Edwin M., 22148 Michigan Ave., Dearborn B
 Pate & Hirn, 532 Michigan Bldg., Detroit 26 ABEG
 Walker, Sam, & Assoc., *S. A. Walker, Jr., 124 S. Woodward Ave., Birmingham AB
 *Ward, A. Edward; see Hamilton, Weeber & Ward
 Williams & Works, *T. C. Williams, 227 Ottawa St., N.W., Grand Rapids ABEG

MINNESOTA

- Banister Eng. Co., *A. W. Banister, 1549 University Ave., St. Paul 4 ABCEFG
 Bettenburg, Townsend & Stolte, 1437 Marshall Ave., St. Paul 4 AB
 Duvall, Arndt, Jr.; see Toltz, King & Day
 Ellison, Robert J., 635 S. Cleveland Ave., St. Paul 5 B
 Hitchcock & Estabrook, 300 Lincoln Bldg., Minneapolis ABCEG-H/KM
 *Kishel, Edward F.; see Bettenburg, Townsend & Stolte
 *Lane, L. E., Masonic Temple, Willmar A
 Lee, Lester D.; see Hitchcock & Estabrook
 *Mayeron, Harry; see G. M. Orr Eng. Co.
 Orr, G. M., Eng. Co., 1004 Marquette Ave., Minneapolis 3 ABG
 Podas, Charles R., 335 E. 53rd St., Minneapolis 9
 Toltz, King & Day, 1509 Pioneer Bldg., St. Paul 1 ABCGJK

MISSISSIPPI

- *Cook, Leland B., Box 290, Tupelo ABCG
 *Webb, Winchell C., 404 Barnett-Madden Bldg., Jackson AB
 *Young, Robert H., 515 Yazoo St., Box 1026, Jackson ABCG

MISSOURI

- *Archer, E. T., & Co., 706 Railway Exchange Bldg., Kansas City 6 ABCEGJ

*Baldwin, R. L.; see Burns & McDonnell Eng. Co.
Bartholomew, Harland, & Assoc., 317 N. 11th St., St. Louis AB
 Benjes, Henry H.; see Black & Veatch
Black & Veatch, 4706 Broadway, Kansas City ABCDEFGJK
Burns & McDonnell Eng. Co., Box 7088, 95th & Troost, Kansas City ABCEFGJK
 *Culbreath, Mark C.; see Burns & McDonnell Eng. Co.
 *Filby, Ellsworth L.; see Black & Veatch
Fulton, Edward A., 3209 Brown Rd., St. Louis ABCG
 *Hands, Glenn; see Burns & McDonnell
Haskins, Riddle & Sharp, *Charles A. Haskins, 800 Finance Bldg., Kansas City 6 ABCEFG
Horner & Shiffrin, 803 Shell Bldg., St. Louis 3 ABCEFGJK
 *Jens, Stifel W., 101 S. Meramec Ave., St. Louis 5 BFG
 *Jones, Richard Y., Miners Bank, Joplin AB
 *Kincaid, Russell G.; see Burns & McDonnell Eng. Co.
 *Kirkwood, A. C., & Assoc., 123 Wirthman Bldg., Kansas City 3 ABCGJK
 *Larkin, Kenneth H., & Assoc., 120 Wirthman Bldg., Kansas City 9 ABG
 Lawrence, R. E.; see Black & Veatch
 *Lischer, Vance C.; see Horner & Shiffrin
 Mathews, C. Kelsey; see Burns & McDonnell Eng. Co.
 McDonnell, Robert E.; see Burns & McDonnell Eng. Co.
 *Myers, E. I., 345 Law Bldg., Kansas City 6 ABGG
Prichard & Assoc., *G. W. Prichard, 206 N. Liberty, Independence ABCFG
 Riley, Russell H.; see Harland Bartholomew & Assoc.
Russell & Axon, 408 Olive St., St. Louis 2 ABCJK
 Scott, Guy R.; see Black & Veatch
 *Veatch, N. T.; see Black & Veatch
 *Wenger, F. E.; see Russell & Axon
 Woodson, Riley D.; see Black & Veatch
 *Wymore, Allan H.; see Burns & McDonnell Eng. Co.

MONTANA

Cory Eng. Co., *J. C. Cory, Box 637, Miles City ABEGH
Hurdle, R. T., & Sons, Box 914, Billings ABCGH
Morrison-Maierle, Inc., *John H. Morrison, Civic Center Bldg., Helena ABCGH
 *Palmer, F. F., Box 486, Forsyth AB
 *Wenzel, William J., 2300—9th Ave N., Great Falls ABCGH

NEBRASKA

Backlund & Jackson, Inc., *B. H. Backlund, 4924 Poppleton Ave., Omaha 6 AB

*Cramer, John W.; see Fulton & Cramer
Daly, Leo A., Co., 633 Insurance Bldg., Omaha ABGJK
 Dier, Clifford L.; see Harold Hoskins & Assoc.
 *Durham, Charles W.; see Henningson, Durham & Richardson
Fulton & Cramer, 922 Trust Bldg., Lincoln ABCGJK
 *Grupe, Edgar Y., East Overland Dr., Scottsbluff ABGH
Henningson, Durham & Richardson, 2962 Harney St., Omaha ABCGJK
 *Hoskins, Harold, & Assoc., 231 N. 11th St., Lincoln ABCGJ
 *Miller, L. E.; see Leo A. Daly Co.
 *Price, Donald D., 1827 S. 26th St., Lincoln AB

NEW JERSEY

*Beavin, Benjamin Everett, Sr.; see Porter, Urquhart & Beavin
 *Birdsall, Claude W., 1700 F St., Belmar AB
 *Burris, Michael M., 485 Engle St., Englewood
Corson, Benjamin I., 120 Woodland Terr., Oaklyn 6 BD
 *Crew, Alfred, 45 N. Broad St., Ridgewood B
 Eckenfelder, W. W.; see Weston, Eckenfelder & Hood, Inc.
 Grune, Werner N., 12 Lynn Court, Rutherford BE
 *Harley, Frank E., & Assoc., Box 344, Wyckoff ABCEG
 Killam, Elson T., 529 Millburn Ave., Short Hills
 *Lendall, Harry N., College of Eng., Rutgers Univ., New Brunswick ABCG
 *Norcom, George D., 118 Conover Lane, Red Bank BD
 Porter, Urquhart & Beavin, 415 Frelinghuysen Ave., Newark 5 ABCEG
 *Purcell, Lee T., 36 De Grasse St., Paterson BCDEFG
 Runyon & Carey Assoc., Frederick O. Runyon, 20 Fulton St., Newark 2 BJK
Senesky & Van Nest, *John J. Senesky, Box 311, Bound Brook AB
 *Sweitzer, Robert J., 811 Cedar St., Riverton BG
Weston, Eckenfelder & Hood, Inc., *Roy F. Weston, 45 N. Broad St., Ridgewood BD

NEW MEXICO

Hatfield Eng. Co., *C. R. Hatfield, 206 Korber Bldg., Albuquerque ABCEG
Herkenhoff & Turney, *Gordon E. Herkenhoff, 223 Montezuma, Santa Fe ABCEG
 *Turney, William F.; see Herkenhoff & Turney

NEW YORK

Alrkem, Inc., 241 E. 44th St., New York BD
 *Arenander, Carl A.; see Malcolm Pirnie Engrs.

*Baffa, John J., 75 West St., New York 6 BCEG
Barker & Wheeler, 36 State St., Albany, ABCEFG
 *Barron, Donald W.; see Albert F. Ganz, Inc.
Blum, Louis D. & Co., 110 E. 42nd St., New York L
 *Bogert, Clinton L., Assoc., 624 Madison Ave., New York ABC
Bogert-Childs Eng. Assoc., 624 Madison Ave., New York ABC
 *Borden, Olney, 109 Dwyer Ave., Liberty AB
Bowe, Albertson & Assoc., *Thomas F. Bowe, 110 William St., New York 7 ABC
 Brashears, M. L.; see Leggette & Brashears
Buck, Selfert & Jost, *George H. Buck, 112 E. 19th St., New York ABCDEFG
Bull & Roberts, Inc., 117 Liberty St., New York 6 D
 *Burris, Michael M., 660 Madison Ave., New York 21 ABFGH
 *Caird, James M., Cannon Bldg., Troy BD
 *Carman, S. P., 149 Leroy St., Binghamton ABC
 Case, Edgar D.; see The Pitometer Co.
Chandler, Harold C., 39 Niblock Court, Albany BD
 *Childs, Fred S.; see Bogert-Childs Eng. Assoc.
 Clifton, C. E.; see James M. Caird
 *Cole, E. Shaw; see The Pitometer Co.
Cotton, Pierce, Streander, Inc., 132 Nassau St., New York ABGK
 Cregg, George W.; see Melvin & Melvin
 *Dixon, G. Gale; see Parsons, Brinckerhoff, Hall & Macdonald
Ebasco Services, Inc., 2 Rector St., New York 6 ACEFGJKL
 *Emerson, Charles A.; see Havens & Emerson
 Ewig, E. W.; see William S. Lozier Co.
Field, Emerson & Morgan, Inc., *William T. Field, 20 Flower Bldg., Watertown ABCG
 *Fuller, Nelson Monroe, Box 436, Batavia BDEFG
Ganz, Albert F., Inc., 511 5th Ave., New York M
 *Gausmann, Roy W.; see J. G. White Eng. Corp.
Haberer, James H., 108 Lynch Ave., Utica BD
 *Hardenbergh, W. A., 310 E. 45th St., New York 7 B
Havens & Emerson, 233 Broadway, New York 7 BCG
Hazen & Sawyer, *Richard Hazen, 110 E. 42nd St., New York 17 BCEFG
 *Henderson, Angus D., 207-10—29th Ave., Bayside 60 BCEFGH
 *Ingram, William T., 20 Point Crescent, Malba B
 *Irish, J. Wilbur, 906 South St., Peekskill AB
Kingsley, John F., Newburgh Filter Plant, Newburgh D

Knappen-Tippett-Abbott-McCarthy, 62 W. 47th St., New York *ABCEFGHIK*

Krehbiel & Krehbiel, *Theodore A. Krehbiel, 2992 Delaware Ave., Kenmore 17 B

Lamprecht, Joseph, Manlius Rd., Fayetteville *ACFG*

Leach, Walter L.; see Havens & Emerson

Leggette & Brashears, R. M. Leggette, 551—5th Ave., New York 17 EF

Lozier, William S., Co., 10 Gibbs St., Rochester 4 B

McCarthy, Gerald T.; see Knappen-Tippett-Abbott-McCarthy

Melvin & Melvin, Merchants Bank Bldg., Syracuse M

Mitchell, Robert D.; see Malcolm Pirnie Engrs.

Niles, Charles A., Bridgehampton B

Nussbaumer, Clarke & Velzy, *Newell L. Nussbaumer, 327 Franklin St., Buffalo 2 BCG

O'Brien & Gere, 204 E. Jefferson St., Syracuse 2 ABCG

Okun, Daniel A.; see Malcolm Pirnie Engrs.

Parsons, Brinckerhoff, Hall & Macdonald, 51 Broadway, New York 6 ABCEFGHIK

Pirnie, Malcolm, Engrs., 25 W. 43rd St., New York 36 ABCEFGH

Pirnie, Malcolm, Jr.; see Malcolm Pirnie Engrs.

Pitometer Co., The, 50 Church St., New York 7 BG

Potts, Clyde, & Assoc., 30 Church St., New York 7 ABCEFG

Purdy, A. C.; see Bull & Roberts, Inc.

Redwood, John P., 415 W. 23rd St., New York 11 CGL

Riddick, Thomas M., 369 E. 149th St., New York 55 BD

St. John, Platt & Carlson, *Leigh E. St. John, 212 Kresge Bldg., Binghamton BCEGIK

Saville, Thorndike, College of Eng., New York Univ., University Heights, New York 53 BF

Sawyer, Alfred W.; see Hazen & Sawyer

Scharff, Maurice R., 366 Madison Ave., New York 17 CG

Seifert, William P.; see Buck, Seifert & Jost

Sella, Charles H., Inc., 15 Washington Ave., Pleasantville ABG

Smith, Benjamin L., & Assoc., 11 N. Pearl St., Albany 7 ABCFG

Smith, George R.; see Charles H. Sells, Inc.

Squire, A. Bradford; see William S. Lozier Co.

Stearns, Donald E., Box 363, Cazenovia ABCEFG

Streander, Philip B.; see Cotton, Pierce, Streander, Inc.

Suter, Russell, 114 S. Lake Ave., Albany 8 B

Symons, George E., 86 Edgewood Ave., Larchmont B

Tanner, John R.; see O'Brien & Gere

Thomas, Howard S., Assoc., 344 East Ave., Rochester 4 ABCEGK

Toth, Albert S.; see Malcolm Pirnie Engrs.

Turner, William D.; see Airkem, Inc.

Velzy, Charles R.; see Nussbaumer, Clarke & Velzy

Vrooman, Morrell, Engrs., Trust Co. Bldg., 21 N. Main St., Gloversville BG

Ward & Moore, *Richard C. Ward, 126 Pine St., Corning ABG

Wendel, Leon H., 33 Morrow Ave., Lockport ABG

Wheeler, Robert C.; see Barker & Wheeler

White, J. G., Eng. Corp., The, 80 Broad St., New York 4 ABCFGH

Whitlock, Ernest W.; see Malcolm Pirnie Engrs.

Wiggin, Thomas H., 132 W. 43rd St., New York 36 BCG

Williams, Stanley N.; see Clyde Potts & Assoc.

NORTH CAROLINA

Baity, Herman Glenn, Box 899, Chapel Hill BDFG

Dickson, W. K., & Co., Inc., 404½ S. Tryon St., Charlotte ABG

Farlow, Joseph N., 2117 Clark Ave., Cameron Village, Raleigh AB

Freeman, William F., Engrs., Inc., 116 E. Commerce St., High Point AB

Fulbright Labs., Inc., Box 1284, Charlotte BD

Main, Charles T., Inc., 317 S. Tryon St., Charlotte ABCFGJK

Mannel, Charles, Box 525, Asheville ABC

Pease, J. N., & Co., 119½ E. 5th St., Charlotte ABGJK

Peirson & Whitman, *N. D. Peirson, Security National Bank Bldg., Raleigh ABC

Rawlins, George S.; see J. N. Pease & Co.

Safford, Truman H.; see Charles T. Main, Inc.

Van Camp, Paul M., 127 E. Pennsylvania Ave., Southern Pines BG

Von Oesen, Henry M., 1719 Dawson St., Wilmington ABM

Wooten, L. E., & Co., Box 2984, Raleigh ABCGJK

Wooten & Wooten, *M. Frank Wooten Jr., 215 Latta Arcade, Charlotte 2 ABK

NORTH DAKOTA

Veigel, L. W., Dickinson AB

OHIO

Arnold, Rosch & Hartline, 143 Fair Ave., N.E., New Philadelphia ABG

Bare, Ben K.; see Burgess & Niple

Barstow, E. D., & Assoc., 163 N. Union St., Akron 4 B

Bird & Tietzel, *Charles F. Bird, 2130 Arlington Ave., Columbus 12 ABCEFG

Bonham, H. E.; see Paul A. Uhlmann & Assoc.

Browne, Floyd G., & Assoc., 123 W. Church St., Marion ABCDEGIK

Bumstead, John C.; see Alfred LeFeber & Assoc.

Burger, Alfred A.; see Havens & Emerson

Burgess & Niple, 584 E. Broad St., Columbus ACFG

Cochran, Omar Neil; see Floyd G. Browne & Assoc.

Columbus Water & Chemical Testing Lab., 4628 Indianola Ave., Columbus 14 BD

Finkbeiner, Pettis & Strout, *Carleton S. Finkbeiner, 518 Jefferson Ave., Toledo BG

Friend, A. M.; see Ralph L. Woolpert Co.

Fuller, Raymond H.; see Burgess & Niple

Gard, Charles M.; see Alden E. Stilson & Assoc.

Graf, Walter W., & Assoc., 350 E. Main St., Lancaster AB

Hartline, Waldo; see Arnold, Rosch & Hartline

Havens & Emerson, *William L. Havens, 1140 Leader Bldg., Cleveland 14 BG

Henry, T. B.; see Jones, Henry & Williams

Jennings-Lawrence Co., 1392 King Ave., Columbus 12 ABCEG

Jones, Frank Woodbury; see Havens & Emerson

Jones, Henry & Williams, 821 Security Bldg., Toledo 4 B

Krumm, Tahlman; see Burgess & Niple

LeFeber, Alfred, & Assoc., 2933 Woodburn Ave., Cincinnati 6 ABCEFG

Loveless, Roger W.; see Alden E. Stilson & Assoc.

MacDowell, Rollin F., & Assoc., 401 Chester-Twelfth Bldg., Cleveland 14 BG

Mace, H. Harland; see Alfred LeFeber & Assoc.

McGill, R. D.; see H. C. Nutting Co.

McIntyre, F. J.; see Columbus Water & Chemical Testing Lab.

Nutting, H. C., Co., The, 4120 Airport Rd., Cincinnati 26 G

Schaefer, Edward J., 607 Glenmont Ave., Columbus 14 EFM

Seidel, R. David; see Floyd G. Browne & Assoc.

Stilson, Alden E., & Assoc., Ltd., 209 S. High St., Columbus ABCEFG

Tatlock, Myron W.; see Ralph L. Woolpert Co.

Tolles, Frank C.; see Havens & Emerson

Uhlmann, Paul A., & Assoc., 1441 N. High St., Columbus 1 ABG

Walker, Carl C.; see Jennings-Lawrence Co.

Woolpert, Ralph L., Co., 360 W. First St., Dayton 2 ABCEG

OKLAHOMA

- Benham Eng. Co.**, *David B. Benham, 550 American National Bldg., Oklahoma City *AB*
- ***Brets, C. E.**, 1916 N. Broadway, Oklahoma City *G*
- Collins & Flood**, *Rex Collins, 222 Arnot Bldg., McAlester; also 106 W. Broadway, Ardmore *ABGJK*
- Fell & Wheeler**, 6339 E. Tecumseh, Tulsa *ABGJ*
- ***Guernsey, C. H.**, Box 3044, Oklahoma City 3 *ABIK*
- ***Holway, W. R., & Assoc.**, 302 E. 18th St., Tulsa 14 *ABFG*
- ***Klaflke, Kenneth**, 2906 Classen Blvd., Oklahoma City 6 *ABG*
- ***Long, V. V., & Co.**, 1300 Colcord Bldg., Oklahoma City 2 *ABCEGJK*
- Owen, Mansur & Steele**, 1642 S. Boston, Tulsa *AB*
- ***Shoebotham, T. B.**; see Benham Eng. Co.
- ***Smith, Otto M.**, Research Foundation of Oklahoma, Agricultural & Mechanical College, Stillwater *D*
- ***Steele, R. W.**; see Owen, Mansur & Steele
- ***Toler, George G., Eng. Co.**, Box 1137, Ada *ABFG*
- ***Wheeler, W. W.**; see Fell & Wheeler

OREGON

- Charlton Labs., Inc.**, David B. Charlton, Box 1048, Portland 1 *D*
- Clark & Groff**, *Lloyd K. Clark, 3245 S. Commercial St., Salem *ABCH*
- ***Corey, R. H.**, 421 Corbett Bldg., Portland *ABC*
- Cornell, Howland, Hayes & Merryfield**, *Holly A. Cornell, 1600 Western Ave., Corvallis *ABCGJK*
- ***Cunningham, John W., & Assoc.**, 1112 Portland Trust Bldg., Portland *ABCFG*
- ***Dorner, W. J.**, 715 Dekum Bldg., Portland 4 *BG*
- ***Green, Carl E., & Assoc.**, 510 Henry Bldg., Portland 4 *ABCG*
- ***Groff, Gilbert**; see Clark & Groff
- ***Haner, N. W., & Assoc.**, 220 S. W. Alder St., Portland 4 *ABC*
- Merryfield, Fred**; see Cornell, Howland, Hayes & Merryfield
- ***Randlett, Fred M.**, 950 S. W. 21st Ave., Portland *ABC*
- ***Rice, Archie C.**; see Cornell, Howland, Hayes & Merryfield
- ***Smithson, Thomas**, 555 S. Cedar Hills Blvd., Beaverton *ABCG*
- Stevens & Thompson Engrs.**, 600 National Bldg., Portland 4 *ABCEGHJ*
- ***Thompson, H. Loren**; see Stevens & Thompson Engrs.
- ***Vanler, Adrian W., & Assoc.**, 861 Willamette St., Eugene *AB*

PENNSYLVANIA

- Albright & Friel**, 121 S. Broad St., Philadelphia 7 *ABCFG*
- ***Baker, Michael, Jr., Inc.**, Baker Bldg., Rochester *ABCEFGHIKM*

- ***Bankson, E. Edwin**; see Ellis E. Bankson & Son
- ***Bankson, Ellis E. & Son**, 1116 Berger Bldg., Pittsburgh 19 *BCGKLM*
- Betz, John Drew**; see W. H. & L. D. Betz
- Betz, W. H. & L. D.**, Gillingham & Worth Sts., Philadelphia 24 *BD*
- Bradford Labs., Inc.**, 137 Main St., Bradford *ABD*
- Brockway Testing Labs.**, DuBois *BD*
- Chester Engrs., The**, 210 E. Park Way, Pittsburgh 12 *ABCDEF*
- ***Corson, Oscar**, 902 Highland Ave., Ambler *ABCFGH*
- ***Davis, D. E.**; see The Chester Engrs.
- ***Ellenberger, A. R.**; see Bradford Labs., Inc.
- ***Estrada, Alfred A.**; see Albright & Friel, Inc.
- ***Fick, Henry H.**; see Weber, Fick & Wilson
- Friel, Francis S.**; see Albright & Friel
- Gannett, Fleming, Corddry & Carpenter, Inc.**, *Farley Gannett, Harrisburg *ABCFGHIJKL*
- Gilbert Assoc., Inc.**, 412 Washington St., Reading *ABCEFGJKL*
- Glance & Glance**, *Ivan M. Glance, 1001 N. Front St., Harrisburg *ABCEDEGK*
- ***Glance, Ivan M., Jr.**; see Glance & Glance
- ***Haseltine, Theodore R., Sr.**; see The Chester Engrs.
- ***Jacobs, Nathan B.**; see Morris Knowles, Inc.
- John, Robert L.**; see Michael Baker Jr., Inc.
- Johnston, Robert M., & Assoc.**, 504 N. 2nd St., Harrisburg
- ***Kerr, S. Logan**, 1518 Bethlehem Pike, Flouertown *GKM*
- Knowles, Morris, Inc.**, 1312 Park Bldg., Pittsburgh 22 *ABCG*
- Kounts, R. Rupert**, Civ. Eng. Dept., Pennsylvania State College, State College *BD*
- ***Laboon, John F.**, 1110 Berger Bldg., Pittsburgh *BG*
- ***Mansfield, Myron G.**; see Morris Knowles, Inc.
- ***Mebus, George B.**, Northwestern National Bank Bldg., Glenside *B*
- Merkel, Paul F.**, 1707 Olive St., Reading *D*
- ***Michels, Joseph A.**, Dallastown, R. D. 1 *ABCG*
- ***Priester, Max U.**; see W. H. & L. D. Betz
- Rice, Cyrus William & Co.**, 15 Noble Ave., Pittsburgh 5 *AB*
- ***Sees, William E., Jr.**, State Chamber of Commerce Bldg., 222 N. 3rd St., Harrisburg
- ***Sheen, Robert T.**, 1300 E. Mermaid Lane, Philadelphia 18 *D*
- ***Simpson, R. W.**; see Gilbert Assoc., Inc.
- Sperry, S. M.**; see Gilbert Assoc., Inc.
- ***Stroh, Charles Kirk**; see The Chester Engrs.
- Warren, J. B.**; see Brockway Testing Labs.

- Weber, Fick & Wilson**, George Weber Jr., 1529 N. 2nd St., Harrisburg *CL*
- ***Zack, Samuel I.**; see Gannett, Fleming, Corddry & Carpenter, Inc.

RHODE ISLAND

- Benford, Lemieux & Della Grotta, Inc.**, *William R. Benford, Harborside Industrial Park, Providence 5 *ABK*

SOUTH CAROLINA

- Adams, R. R.**; see J. E. Sirrine Co.
- ***McCrary, John, Co.**, 9 State St., Charleston *AB*
- McPherson Co.**, 408 S. Main St., Greenville *ABCGJK*
- Palmer & Malone**, *C. P. Palmer, 63 Law Range, Sumter *AB*
- Sirrine, J. E., Co.**, Box 960, Greenville *ABCEFGJK*

SOUTH DAKOTA

- ***McWayne, Albert**, see Perkins & McWayne
- Perkins & McWayne**, 320 Paulton Bldg., Sioux Falls *ABGJK*

TENNESSEE

- ***Clouser, L. H.**, Box 431, Knoxville *ABC*
- Schmidt Eng. Co.**, *L. A. Schmidt Jr., 817 Broad St., Chattanooga 2 *ABGM*
- ***Turner, W. W., Co.**, 206½ Union St., Nashville 3 *A*

TEXAS

- Allen, James D.**; see Yeatts & Allen
- ***Bakke, O. M.**; see Houston Labs.
- ***Bartlett, Terrell Engrs.**, 232 Bedell Bldg., 118 Broadway, San Antonio 5 *ABCFGH*
- Beretta, J. W. Engrs., Inc.**, 902 Travis Bldg., San Antonio *ABCGJK*
- ***Brenneke, A. M.**; see Chappell & Brenneke
- ***Castella, W. F., & Assoc.**, 1211 W. Hildebrand, San Antonio *ABCFGH*
- Chappell & Brenneke**, 312 Burt Bldg., Dallas *AB*
- ***Clark, S. C.**; see Sigler, Clark & Winston
- ***Collins, Malcolm A.**; see J. W. Baretta Engrs., Inc.
- ***Cooper, S. C.**; see Parkhill, Smith & Cooper
- ***Dannenbaum, J. B.**, 3940 Main St., Houston 2 *ABEG*
- Dunbar & Dickson**, *T. J. Dunbar Jr., Goldberg Bldg., Box 1082, Freeport *ABCGH*
- Forrest & Cotton**, *T. C. Forrest Jr., 803 Praetorian Bldg., Dallas 1 *ABC*
- Freese, Nichols & Turner**, *Simon Wilke Freeze, 2111 C & I Life Bldg., Houston *ABCGHIK*
- Garrett Eng. Co.**, *M. Truett Garrett Sr., 5003 Alameda Rd., Houston 4 *ABCGH*
- ***Guyton, William F.**, 307 W. 12th St., Austin 1 *EF*

*Half, Albert H., 2912½ Hall St., Dallas *ABCDGH*
Hatfield Eng. Co., *G. C. Hatfield, 517 W. 10th, Amarillo *ABCEG*
Houston Labs., 311 Chenevert, Houston
Hunter, Homer A., Assoc., 3708 Abrams Rd., Dallas *ABCEFG*
Hunter, William R., 2514½ Lee St., Greenville *A*
Huppert, Jack, Co., 1018 Bandera Rd., San Antonio *B*
Kelley, Robert W., Jr., 16 Bayville Dr., Baytown *AB*
Koch & Fowler, 3900 Lemmon Ave., Dallas *ABCG*
Lockwood & Andrews, 904 Union National Bank Bldg., Houston *ABCGJK*
Lundy, Thomas E.; see Koch & Fowler
McCormick & Teller, *Alexis McCormick, 2711 Grant St., Box 6276, Houston *6 ABGH*
Myers & Noyes & Assoc., E. L. Myers, 320 Wilson Bldg., Corpus Christi *ABCEGH*
Newnam, Frank H., Jr.; see Lockwood & Andrews
Nichols, Robert L.; see Freese, Nichols & Turner
Noyes, E. N.; see Myers & Noyes & Assoc.
Parkhill, Smith & Cooper, 1414 Ave. J, Lubbock *ABCEFG*
Porter, Fred B.; see Southwestern Labs.
Powell & Powell, *William Llewellyn Powell, 501 Thomas Bldg., Dallas *ABCFGH*
Rady, Joe J., & Co., 511-19 Insurance Bldg., Fort Worth *ABCEG*
Roberts, H. N., & Assoc., 1310 Ave. Q, Lubbock *ABCEFGJ*
 Robinson, Delbert W.; see Joe J. Rady & Co.
Rose, Nicholas A., 1010 Dennis Ave., Houston *2 EF*
Russell, S. A., Box 912, Rosenberg *ABG*
Sellgmann, Irving S., 410 Frost Bank Bldg., San Antonio *5 ABCG*
Sigler, Clark & Winston, Box 478, Weslaco *ABCGHJ*
Silvey, J. K. G., Box 5183 N.T. Station, Denton *M*
Smith, Bernard J., Rm. 203, 3405 Milton St., Dallas *5 ABCGL*
Southwestern Labs., Box 1379, Fort Worth
 Teller, Carl Freeman; see McCormick & Teller
Turner, Marvin, Engrs., The, Nalle Bldg. Annex, Austin *ABCG*
Turner, N. P.; see Freese, Nichols & Turner
Ward, Joe E., 545 Nacol Bldg., Wichita Falls *ABCEGHJ*
Yentis & Allen, 158½ Cypress, Abilene *ABCG*

UTAH

*Adams, Thomas C., 559 Union Pacific Bldg. Annex, S. Temple & Main Sts., Salt Lake City *ABCGH*

VIRGINIA

*Brockenbrough, Austin, Jr.; see Perrow & Brockenbrough
Froehling & Robertson, Inc., Richmond *BCD*
Hayes, Seay, Mattern & Mattern, 609 S. Jefferson St., Roanoke *AB*
Lublin, McGaughy & Assoc., 21st St. at Llewellyn Ave., Norfolk *ABCG*
 *Mattern, E. K.; see Hayes, Seay, Mattern & Mattern
Murray, Franklin R., Citizens Marine Jefferson Bank Bldg., Newport News *ABCEH*
Perrow & Brockenbrough, *Warren C. Perrow, 1900 W. Broad St., Richmond *AB*
 *Rives, James A.; see Lublin, McGaughy & Assoc.
Boyer, R. Stuart, & Assoc., 15 W. Cary St., Richmond *ABCFG*
 Ruehl, Edward H.; see R. Stuart Royer & Assoc.
Sturgeon, Myron, Engrs., 2124 Kimball Ter., Norfolk *12 ABG*
 Weaver, Julian Mason; see Froehling & Robertson, Inc.
Wiley & Wilson, 905 Peoples Bank Bldg., Lynchburg *ABCFGJK*
 *Wilson, E. F. J.; see Wiley & Wilson

WASHINGTON

Beck, R. W., & Assoc., 1505 Tower Bldg., Seattle *ABCFGJKL*
Carey & Kramer, 1912 First Ave., Seattle *1 ABGJ*
General Eng. Co., Inc., 4010 Stone Way, Seattle *3 ABG*
 *Harstad, H. T., & Assoc., Arctic Bldg., Seattle *BG*
 *Heath, J. Ray; see General Eng. Co., Inc.
 *Hill, W. R.; see Parker & Hill
 *Johnson, Roy W., 605 Arctic Bldg., Seattle *4 ABF*
 *Kramer, Harrison W.; see Carey & Kramer
Malony, W. L., Symons Bldg., Spokane *8 ABE*
Parker & Hill, 2021 Smith Tower, Seattle *4 ABEFGH*
 *Snyder, M. K., Box 261, Sequim *ABG*
 *Wallace, John R., Jr.; see R. W. Beck & Assoc.
 *Wolff, Richard E., Co., 1506 Smith Tower, Seattle *4 ABCEFG*
 *Woodward, Walter L., Empire State Bldg., Spokane *1 ABGH*
Worthen & Wing, *F. Richard Worthen, 11120 Gravelly Lake Dr., Tacoma *9 ABGJK*

WEST VIRGINIA

Blundon, Snyder & Small, *J. Paul Blundon, 98 N. Main St., Keyser *BC*
 *Kelley, W. D., 1206 Kanawha Blvd., Charleston *1 ABC*
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Index to Journal AWWA, 1940-1944—Paper-bound supplement to *Index to Proceedings and Journal AWWA*. 64 pp. March 1945. Paper-bound. Price, for general sales, \$1.00; to members paying in advance, 80¢.

Manual of Water Works Accounting—Prepared jointly by the AWWA and the Municipal Finance Officers Association, this 500-page Manual contains twenty chapters covering all utility accounting practices. 1938; 2nd printing, 1951. Price, for general sales, \$4.00; to members paying in advance, \$3.20.

The Quest for Pure Water—By M. N. Baker. A history of water purification from the earliest records to the 20th century. 73 illustrations, 900 references, 527 pp. 1948; 2nd printing, 1949. Price, for general sales, \$5.00; to members paying in advance, \$4.00.

Standard Methods for the Examination of Water and Sewage—Published jointly by

the AWWA and the American Public Health Association. Cloth bound, 300 pages. Ninth edition, 1946. Available through the American Public Health Association, 1790 Broadway, New York 19, N.Y., at \$4.00, net.

Survival and Retirement Experience With Water Works Facilities—Prepared by a joint committee of the AWWA and the Institute of Water Supply Utilities. Includes reports published in installments in JOURNAL, 1945-46, with additional material and summary tables. Cloth bound, 566 pp. 1947. Price, for general sales, \$3.00; to members paying in advance, \$2.40.

Water Quality and Treatment—A manual prepared by AWWA. A comprehensive survey of water quality standards and procedures for purification, softening and other conditioning. Completely revised and enlarged second edition. 451 pp. 1950; 2nd printing, 1951. Price, for general sales, \$5.00; to members paying in advance, \$4.00.

Manual of British Water Supply Practice—A publication of the Institution of Water Engineers, London; distributed in U.S. by AWWA. The essence of the water supply art, as practiced in Great Britain. Cloth bound, 900 pp. 1950. \$7.50, net.

PERIODICALS AND PAMPHLETS

Journal American Water Works Association. A monthly magazine of technical papers, discussions, news and reports. Issued quarterly from 1914 to 1919; bi-monthly from 1920 to September 1924; monthly ever since. Annual indexes are contained in the December issue of each year from 1940 on. Cumulative indexes of authors and articles grouped by topics are described on p. 1. Subscriptions only in conjunction with AWWA membership in U.S., Canada and Cuba, or \$7.00 to libraries; not sold to individuals. Postage: to Canada, 20¢ additional; other foreign (except Pan-American Union), 80¢. Single copy price (of issues from 1925 on), for general sales, 75¢; to AWWA members, 50¢.

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Order by title and number, not by topic. Copies of Journal articles not available in reprint form can generally be obtained by ordering a copy of the issue in which they were published; for terms, see "Journal AWWA" in preceding "Periodicals and Pamphlets" section.

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AWWA A100-46 (formerly 4A.1-1946)—Standard Specifications for Deep Wells. Approved as Tentative on April 30, 1945,

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AWWA B100-50 (formerly 5C-1950)—Standard Specifications for Filtering Material. Revision of 1943 document approved as Tentative Nov. 15, 1948, and published in the March 1949 JOURNAL. Made Standard Jan. 16, 1950. 16 pp., 25¢.

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AWWA B700-49—The Fluoridation of Public Water Supplies. A statement of recommended policy and procedure approved on May 29, 1949, and published in the July 1949 JOURNAL. 5 pp., 20¢.

AWWA B701-50T (formerly 5W1.90-T-1950)—Tentative Standard Specifications for Sodium Fluoride. Approved as Tentative July 21, 1950, and published in the September 1950 JOURNAL. 7 pp., 20¢.

C—Distribution

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AWWA C100-52T (formerly 7C.1-1908)—Tentative Standard Specifications for Cast-Iron Pressure Fittings. The "special castings" portion of the original 1908 specifications for cast-iron pipe and castings; still valid for replacing old fittings, but superseded by various American Standards (which follow) for new installations. Latest revision, Dec. 31, 1952, published in the March 1953 JOURNAL. 28 pp., 55¢.

AWWA C101-39 * (ASA A21.1-1939)—American Recommended Practice Manual for the Computation of Strength and Thickness of Cast-Iron Pipe. Adopted by AWWA and the American Standards Assn. December 1939 and published in the December 1939 JOURNAL. 81 pp., 65¢.

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AWWA C104-53 * (ASA A21.4-1953)—American Standard Specifications for Cement-Mortar Lining for Cast-Iron

Pipe and Fittings. Adopted by AWWA and the American Standards Assn. December 1939 and published in the December 1939 JOURNAL. Latest revision, Jan. 13, 1953. 9 pp., 35¢.

AWWA C106-53 * (ASA A21.6-1953)—American Standard Specifications for Cast-Iron Pipe Centrifugally Cast in Metal Molds, for Water or Other Liquids. Adopted by AWWA and the American Standards Assn. Jan. 13, 1953, and published in the February 1953 JOURNAL. 20 pp., 40¢.

AWWA C108-53 * (ASA A21.8-1953)—American Standard Specifications for Cast-Iron Pipe Centrifugally Cast in Sand-Lined Molds, for Water or Other Liquids. Adopted by AWWA and the American Standards Assn. Jan. 13, 1953, and published in the February 1953 JOURNAL. 24 pp., 45¢.

AWWA C110-52 * (ASA A21.10-1952)—American Standard Specifications for Short-Body Cast-Iron Fittings, 3 Inch to 12 Inch, for 250-psi Water Pressure Plus Water Hammer. Adopted by AWWA and the American Standards Assn. Sept. 30, 1952, and published in the November 1952 JOURNAL. 10 pp., 35¢.

AWWA C111-53 * (ASA A21.11-1953)—American Standard Specifications for a Mechanical Joint for Cast-Iron Pressure Pipe and Fittings. Adopted by AWWA

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and the American Standards Assn. Jan. 13, 1953, and published in the April 1953 JOURNAL. 12 pp., 35¢.

C200—Steel Pipe

AWWA C201-50 (formerly 7A.3-1950)—Standard Specifications for Electric Fusion Welded Steel Water Pipe of Sizes 30 Inches and Over. Published as Tentative in the January 1940 JOURNAL and made Standard Apr. 25, 1940. Latest revision June 21, 1950. 20 pp., 30¢.

AWWA C202-49 (formerly 7A.4-1949)—Standard Specifications for Steel Water Pipe of Sizes up to but Not Including 30 Inches. Published as Tentative Revision of 1941 document in the April 1943 JOURNAL. Made Standard Oct. 3, 1949. Latest revision June 21, 1950. 28 pp., 40¢.

AWWA C203-51 (formerly 7A.5-1950)—Standard Specifications for Coal-Tar Enamel Protective Coatings for Steel Water Pipe of Sizes 30 Inches and Over. Published as Tentative in the January 1940 JOURNAL and made Standard Apr. 25, 1940. Latest revision May 1, 1951. 28 pp. (reprinted under same cover as AWWA C204-50, description of which follows).

AWWA C204-51 (formerly 7A.6-1950)—Standard Specifications for Coal-Tar Enamel Protective Coatings for Steel Water Pipe of Sizes up to but Not Including 30 Inches. Published as Tentative in the January 1940 JOURNAL and made Standard Apr. 25, 1940. Latest revision May 1, 1951. 24 pp. (reprinted under same cover as AWWA C203-50), 60¢.

AWWA C205-41 (formerly 7A.7-1941)—Standard Specifications for Cement-Mortar Protective Coating for Steel Water Pipe of Sizes 30 Inches and Over. Published as Tentative in the January 1940 JOURNAL and made Standard June 26, 1941. *Revision pending.* 16 pp., 25¢.

AWWA C206-50 (formerly 7A.8-1950)—Standard Specifications for Field Welding of Steel Water Pipe Joints. Approved as Tentative Jan. 10, 1946, and published in the March 1946 JOURNAL. Made Standard Nov. 27, 1950. Latest revision Oct. 3, 1949. 12 pp., 25¢.

AWWA C207-52T—Tentative Standard Specifications for Steel Pipe Flanges. Approved as Tentative May 9, 1952, and published in the October 1952 JOURNAL. 9 pp., 25¢.

C300—Concrete Pipe

AWWA C300-52 (formerly 7B.1)—Standard Specifications for Reinforced Concrete Water Pipe—Steel Cylinder Type, Not Prestressed. Approved as Tentative Dec. 11, 1947, and published in the March 1948 JOURNAL. Revised and made Standard June 13, 1952. 14 pp., 25¢.

AWWA C301-52 (formerly 7B.2)—Standard Specifications for Reinforced Concrete Water Pipe—Steel Cylinder Type, Prestressed. Approved as Tentative Nov. 21, 1949, and published in the December 1949 JOURNAL. Revised and made Standard June 13, 1952. 16 pp., 25¢.

AWWA C302-53—Standard Specifications for Reinforced Concrete Water Pipe—Noncylinder Type, Not Prestressed. Approved as Tentative Sept. 4, 1951, and published in the October 1951 JOURNAL. Made Standard May 15, 1953. 15 pp., 25¢.

C400—Asbestos-Cement Pipe

AWWA C400-53T—Tentative Standard Specifications for Asbestos-Cement Water Pipe. Approved as Tentative May 15, 1953, and published in the July 1953 JOURNAL. 8 pp., 20¢.

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AWWA C500-52T (formerly 7F.1)—Tentative Standard Specifications for Gate Valves for Ordinary Water Works Service. Revision of 1938 document approved May 9, 1952, and published in the September 1952 JOURNAL. 16 pp., 25¢.

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AWWA C502-53 (formerly 7F.3)—Standard Specifications for Fire Hydrants for Ordinary Water Works Service. Revision of 1940 document approved Mar. 16, 1953, and published in the May 1953 JOURNAL. 12 pp. (printed under same cover as C503-37, description of which follows), 25¢.

AWWA C503-37 (formerly 7F.3.1-1937)—**Standard Specifications for Uniform Marking of Fire Hydrants.** Published as Tentative in the April 1937 JOURNAL and made Standard June 7, 1937. (Printed under same cover as C502-40).

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AWWA C600-49T (formerly 7D.1-T-1949)—**Tentative Standard Specifications for Installation of Cast-Iron Water Mains.** Revision of 1938 document approved as Tentative June 3, 1949, and published in the December 1949 JOURNAL. 33 pp., 50¢.

AWWA C601-53T (formerly 7D.2)—**A Tentative Procedure for Disinfecting Water Mains.** Revision of 1947 document approved as Tentative Mar. 6, 1953, and published in the August 1953 JOURNAL. Reprinted together with commentary, "Revised Main Disinfection Procedure," by Marshall P. Crabill. 12 pp., 25¢.

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AWWA C700-46 (formerly 7M.1-1946)—**Standard Specifications for Cold Water Meters—Displacement Type.** Published as Tentative in the December 1941 JOURNAL and made Standard May 10, 1946. 12 pp., 25¢.

AWWA C701-47 (formerly 7M.2-1947)—**Standard Specifications for Cold Water Meters—Current Type.** Published as Tentative in the April 1946 JOURNAL and made Standard July 25, 1947. 12 pp., 25¢.

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Tentative in the April 1946 JOURNAL and made Standard July 25, 1947. 11 pp., 25¢

AWWA C703-49 (formerly 7M.4-1949)—**Standard Specifications for Cold Water Meters—Fire Service Type.** Published as Tentative in the February 1947 JOURNAL and made Standard Jan. 18, 1949. 12 pp., 25¢.

AWWA C704-50 (formerly 7M.5-1950)—**Standard Specifications for Cold Water Meters—Current Type—Propeller Driven.** Approved as Tentative July 21, 1949, and published in the August 1949 JOURNAL. Made Standard May 25, 1950. 12 pp., 25¢.

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AWWA C800-48 (formerly 7T.1-1948)—**Standard Specifications for Threads for Underground Service Line Fittings.** Approved as Tentative July 25, 1947, and published in the October 1947 JOURNAL. Made Standard Sept. 15, 1948. Included under same cover is "Collected Standard Specifications for Service Line Materials," a committee report. 15 pp., 25¢.

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AWWA C900-40 (formerly 7G.1-1940)—**Recommended Practice for Distribution System Records.** Approved Jan. 16, 1940, and published in the February 1940 JOURNAL. Included under same cover are reprints of "Economies in Office Forms" by Israel Rafkind and "Coordinating Operating System Records With Accounting Records" by Nathan B. Jacobs. 52 pp., 60¢.

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proved May 9, 1952. Combined with AWWA D102, description of which appears below, in a single booklet. Made Standard May 15, 1953. 32 pp., 50¢.

AWWA D102-52T—Tentative Recommended Practice for Painting and Repainting Steel Water Storage Tanks, Standpipes, Reservoirs, and Elevated Tanks. Approved by AWWA as Tentative May 9, 1952, and published in the August 1952 JOURNAL. Available only in combination with AWWA D100 or AWWA D101, prices of which are given above.

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_____	B600	0.25	_____	_____	C502 & C503	0.25	_____
_____	B700	0.20	_____	_____	C600	0.50	_____
_____	B701	0.20	_____	_____	C601	0.25	_____
_____	C100	0.55	_____	_____	C700	0.25	_____
_____	C101 (A21.1)	0.65	_____	_____	C701	0.25	_____
_____	C102 (A21.2)	0.45	_____	_____	C702	0.25	_____
_____	C104 (A21.4)	0.35	_____	_____	C703	0.25	_____
_____	C106 (A21.6)	0.40	_____	_____	C704	0.25	_____
_____	C108 (A21.8)	0.45	_____	_____	C800	0.25	_____
_____	C110 (A21.10)	0.35	_____	_____	C900	0.60	_____
_____	C111 (A21.11)	0.35	_____	_____	D100 & D102	0.70	_____
_____	Complete sets of specifications A100 through D102, above			_____	D101 & D102	0.50	_____
						\$15.25	_____

TOTAL..... \$ _____

(Be sure to provide the information required on the reverse of this sheet)

Water Works Buyers' Guide

This list of products and services has been compiled from check lists submitted by AWWA Associate Members or from past records. Further information about the products of many firms may be obtained from their advertisements (see index on p. ii). The full address of the firms listed are given alphabetically in the directory of Associate Members beginning on p. 88.

Abrasives

Carborundum Co., The, Refractories Div.
Johns-Manville Sales Corp.
Republic Supply Co. of California

Accounting Machines

Remington Rand Inc.

Acidizing; see Well Reconditioning

Activated Carbon

Barada & Page, Inc.
Culligan Zeolite Co.
Graver Water Conditioning Co.
Illinois Water Treatment Co.
Industrial Chemical Sales Div., West Virginia Pulp & Paper Co.
Infilco, Inc.
Jones, John Wiley, Co.
Lyon Chemicals, Inc.
Permutit Co., The
Pittsburgh Coke & Chemical Co.
Salomon, L. A., & Bros.
Tesco Chemicals, Inc.

Aerators

American Well Works
Bacharach, E. W., Inc.
Bird-Archer Co., Ltd., The
Carborundum Co., The
Carter, Ralph B., Co.
Chicago Pump Co.
General Filter Co.
Graver Water Conditioning Co.
Illinois Water Treatment Co.
Infilco, Inc.
Leopold, F. B., Co., Inc.
Maintenance Engineering Corp.
Permutit Co., The
Refinite Corp.
Vogt Mfg. Co.
Walker Process Equipment, Inc.

Agitators

Bacharach, E. W., Inc.
Carter, Ralph B., Co.
Consolidated Western Steel Corp.
Infilco, Inc.
Leopold, F. B., Co., Inc.
Morse Bros. Machinery Co.
Permutit Co., The
Stuart Corp.
Vogt Mfg. Co.
Walker Process Equipment, Inc.

Air Compressors

Allis-Chalmers Mfg. Co.
De Laval Steam Turbine Co.
Flexible Sewer-Rod Equipment Co.
Ingalls, John, Co., Ltd.
Jaeger Machine Co., The
Lindsay, P. K., Co.
Worthington Corp.

Air Lift Pumping Systems

Carlson Well Supply Co.
Carter, Ralph B., Co.
Walker Process Equipment, Inc.

Alum (Sulfate of Alumina)

Alexander Chemical Corp.
American Cyanamid Co.

American Oil & Supply Co.

Barada & Page, Inc.
Consolidated Chemical Industries, Inc.
General Chemical Div., Allied Chemical & Dye Corp.
Lyon Chemicals, Inc.
Mathieson Chemical Corp.
Pioneer Salt Co.
Tesco Chemicals, Inc.

Ammonia

American Oil & Supply Co.
Barada & Page, Inc.
General Chemical Div., Allied Chemical & Dye Corp.
Great Western Div., Dow Chemical Co.
Jones, John Wiley, Co.
Lyon Chemicals, Inc.
Mathieson Chemical Corp.
Pioneer Salt Co.
Tesco Chemicals, Inc.

Ammonia Feeders

Everson Mfg. Co.
Fischer & Porter Co.
Omega Machine Co.
Proportioners, Inc.
Wallace & Tiernan Co., Inc.

Analyzers, Pipeline Network

Standard Electric Time Co., The

Base Exchange; see Ion Exchange

Bleaching Clay

General Reduction Co.
Jones, John Wiley, Co.
Stuart Corp.

Bleaching Powder; see Chloride of Lime

Blowers

Allis-Chalmers Mfg. Co.
Chicago Pump Co.
De Laval Steam Turbine Co.
Morse Bros. Machinery Co.
Westinghouse Electric Corp.

Boilers

American Pipe & Construction Co.
Babcock & Wilcox Co., The
Crane Co.
Dominion Bridge Co.
Ingalls, John, Co., Ltd.
Natural Gas Equipment, Inc.

Books, Record; see Meter Reading and Record Books

Books, Technical; see Publications

Boxes; see Curb Boxes; Meter Boxes

Brass Goods

American Brass Co., The
Crane Co.
Farnam Brass Works Co., The
Greenberg's, M., Sons
Hays Mfg. Co.
Jones, James, Co.
McDonald, A. Y., Mfg. Co.

Mueller Brass Co.

Mueller Co.
Red Hed Mfg. Co.
Welsbach Corp., The, Ozone Processes Div.

Business Machines

Burroughs Adding Machine Co.
Remington Rand Inc.

Calcium Hydroxide; see Lime

Calcium Hypochlorite

Alexander Chemical Corp.
American Oil & Supply Co.
Barada & Page, Inc.
Culligan Zeolite Co.
Fields Point Mfg. Corp.
Jones, John Wiley, Co.
Lyon Chemicals, Inc.
Mathieson Chemical Corp.
Pioneer Salt Co.
Pittsburgh Plate Glass Co., Columbia-Southern Chemical Corp.

Calcium Oxide; see Lime

Calking; see Jointing

Carbon; see Activated Carbon

Carbon Dioxide

Mathieson Chemical Corp.

Carbon Dioxide Generators

Cardox Corp.
Walker Process Equipment, Inc.

Castings

American Cast Iron Pipe Co.
American Well Works
Babcock & Wilcox Co., The
Bethlehem Steel Co.
Carson, H. Y., Co.
Chain Belt Co.
Clark, H. W., Co.
Clow, James B., & Sons
Crane Co.
Dayton Foundry
Dewey Bros., Inc.
Greenberg's, M., Sons
Industrial Iron Works
Mueller Brass Co.
Sherman Machine & Iron Works
Smith, A. P., Mfg. Co., The
Taylor Foundry Co.
Terminal City Iron Works, Ltd.
Traverse City Iron Works
Trinity Valley Iron & Steel Co.
Warren Foundry & Pipe Corp.
Wood, R. D., Co.

Cathodic Protection Equipment

Catholic Rustproofing Co.
Chemical Fire & Rust Proofing Corp.
Electro Rust-Proofing Corp. (N.J.)
General Electric Co.
Harco Corp., Cathodic Protection Div.
McCrea Corrosion Eng. Co.
O'Connor Rust-Proofing Co., The
Westinghouse Electric Corp.

Cation Exchange; see Ion Exchange

(Continued on page 66)

(Continued from page 65)

Caustic Soda (Sodium Hydroxide)

Alexander Chemical Corp.
American Cyanamid Co.
American Oil & Supply Co.
Barada & Page, Inc.
Diamond Alkali Co.
Fields Point Mfg. Corp.
Great Western Div., Dow Chemical Co.
Hooker Electrochemical Co.
Jones, John Wiley, Co.
Klenzade Products, Inc.
Lyon Chemicals, Inc.
Mathieson Chemical Corp.
Niagara Alkali Co.
Pioneer Salt Co.
Pittsburgh Plate Glass Co., Columbia-Southern Chemical Corp.

Cement

Barrett Div., The, Allied Chemical & Dye Corp.
Centrine Corp.
Pipe Linings, Inc.
Pittsburgh Coke & Chemical Co.

Cement-Mortar Lining: see Coating and Lining, Metal Protective

Chemical Cleaning: see Pipe Cleaning; Well Reconditioning

Chemical Feeders

Alexander Chemical Corp.
American Water Softener Co.
Bacharach, E. W., Inc.
Belco Industrial Equipment Div.
Bird-Archer Co., The
Bird-Archer Co., Ltd., The
Cochrane Corp.
Culligan Zeolite Co.
Electric Chemical Co.
Everson Mfg. Co.
Fischer & Porter Co.
Graver Water Conditioning Co.
Haering, D. W., & Co., Inc.
Inflico, Inc.
Klenzade Products, Inc.
Leopold, F. B., Co., Inc.
Omega Machine Co.
Permutit Co., The
Phipps & Bird, Inc.
Pioneer Salt Co.
Proportioners, Inc.
Stuart Corp.
Wallace & Tiernan Co., Inc.

Chemical Scale Removal Services

Alexander Chemical Corp.
Bird-Archer Co., The
Haering, D. W., & Co., Inc.

Chloride of Lime

Barada & Page, Inc.
Jones, John Wiley, Co.
Pioneer Salt Co.

Chlorination Equipment

Alexander Chemical Corp.
American Water Softener Co.
Belco Industrial Equipment Div.
Builders-Providence, Inc.
Culligan Zeolite Co.
Everson Mfg. Co.
Fischer & Porter Co.
Flexible Sewer-Rod Equipment Co.
Graver Water Conditioning Co.
Hellige, Inc.
Klenzade Products, Inc.
LaMotte Chemical Products Co.
McCarthy Well Co.
Phipps & Bird, Inc.
Pioneer Salt Co.
Proportioners, Inc.
Wallace & Tiernan Co., Inc.

Chlorine Dioxide Chemicals

Alexander Chemical Corp.
Mathieson Chemical Corp.
Pioneer Salt Co.

Chlorine, Liquid

Alexander Chemical Corp.
American Oil & Supply Co.
Barada & Page, Inc.
Coastal Chemical Co., Inc.
Diamond Alkali Co.
Fields Point Mfg. Corp.
Great Western Div., Dow Chemical Co.
Hooker Electrochemical Co.
Jones, John Wiley, Co.
Lyon Chemicals, Inc.
Mathieson Chemical Corp.
McKesson & Robbins, Inc.
Niagara Alkali Co.
Pioneer Salt Co.
Pittsburgh Plate Glass Co., Columbia-Southern Chemical Corp.
Tesco Chemicals, Inc.

Clamps, Pipe Repair

Baker, R. H., & Co., Inc.
Carson, H. Y., Co.
Clow, James B., & Sons
Dayton Foundry
Dewey Bros., Inc.
Dresser Mfg. Div.
Ellis & Ford Mfg. Co.
Federal Pipe & Tank Co.
Mueller Co.
Pollard, Joseph G., Co., Inc.
Skinner, M. B., Co.
Smith-Blair, Inc.
Smith-Scott Co.
Stauffer Mfg. Co.
Utility Clamp & Equipment Co.

Clarifiers

American Water Softener Co.
American Well Works
Belco Industrial Equipment Div.
Bird-Archer Co., Ltd., The
Carter, Ralph B., Co.
Chain Belt Co.
Chicago Pump Co.
Cochrane Corp.
Dorr Co., The
General Filter Co.
Graver Water Conditioning Co.
Illinois Water Treatment Co.
Inflico, Inc.
Jeffrey Mfg. Co., The
Johns-Manville Sales Corp.
Maintenance Engineering Corp.
Permutit Co., The
Preload Co., Inc., The
Stuart Corp.
Walker Process Equipment, Inc.

Cleaning, Pipe: see Pipe Cleaning

Coagulants: see also Alum; Iron Salts

Coagulants

Aldydro, Inc.
Barada & Page, Inc.
Electric Chemical Co.
Flox Co., Inc.
General Chemical Div., Allied Chemical & Dye Corp.
General Reduction Co.
Mathieson Chemical Corp.
National Aluminate Corp.

Coagulators

American Well Works
Belco Industrial Equipment Div.
Carter, Ralph B., Co.
Chain Belt Co.
Chicago Pump Co.
Dorr Co., The
Graver Water Conditioning Co.

Inflico, Inc.
Jeffrey Mfg. Co., The
Leopold, F. B., Co., Inc.
Maintenance Engineering Corp.
Permutit Co., The
Roberts Filter Mfg. Co.
Stuart Corp.
Vogt Mfg. Co.
Walker Process Equipment, Inc.

Coating and Lining, Metal Protective: Cement-Mortar

American Pipe & Construction Co.
Central Foundry Co., The
Centrine Corp.
Clow, James B., & Sons
Forni, George P.
G & M Duct Cleaning & Rust Proofing Corp.
Gifford-Hill-American, Inc.
Industrial Iron Works
Pipe Linings, Inc.
Southern Pipe & Casing Co.
Stuart Corp.
Tate Pipe Linings, Inc.
United Concrete Pipe Corp.

Coating and Lining, Metal Protective: Coal Tar

Barrett Div., The, Allied Chemical & Dye Corp.
Briggs, W. A., Bitumen Co.
Central Foundry Co., The
Chemical Fire & Rust Proofing Corp.
Clow, James B., & Sons
Consolidated Western Steel Corp.
G & M Duct Cleaning & Rust Proofing Corp.
Hill, Hubbell & Co., Div. General Paint Corp.
Hydraulic Supply Mfg. Co.
Inertol Co., Inc.
Koppers Co., Inc.
O'Connor Rust-Proofing Co., The
Pittsburgh Coke & Chemical Co.
Reilly Tar & Chemical Corp.
Southern Pipe & Casing Co.
Steel Protection & Chemical Co., Inc.

Coating and Lining, Metal Protective: Paint

Atlas Mineral Products Co., The
Earrett Division, The, Allied Chemical & Dye Corp.
Chemical Fire & Rust Proofing Corp.
Consolidated Western Steel Corp.
Craftsmen Painting Service
Dixon, Joseph, Crucible Co.
G & M Duct Cleaning & Rust Proofing Corp.
Gregg Co., The
Hydraulic Supply Mfg. Co.
Inertol Co., Inc.
Pittman, William G., Co.
Pittsburgh Coke & Chemical Co.
Reilly Tar & Chemical Corp.
Simmer, W. R., Co.
Southern Pipe & Casing Co.
Steel Protection & Chemical Co., Inc.

Coating and Lining, Metal Protective: Other

American Pipe & Construction Co.
Atlas Mineral Products Co., The
Bird-Archer Co., Ltd., The
Consolidated Western Steel Corp.
G & M Duct Cleaning & Rust Proofing Corp.
Hydraulic Supply Mfg. Co.
Kelly Pipe Co.
Smith-Scott Co.
Southern Pipe & Casing Co.

Cocks, Curb and Corporation

Carson, H. Y., Co.
Farnam Brass Works Co., The

(Continued on page 68)

30 YEARS GIVE PROOF of Dependability!

WRITES: J. F. Bearden, Superintendent,
Department of Water Supply, Walhalla, South Carolina.



J. F. BEARDEN
SUPERINTENDENT

Town of Walhalla
Department of Water Supply
WALHALLA, S. C.

September 3, 1952

Mr. C. F. McAuley
Rockwell Manufacturing Company
1495 Northside Drive, N.W.
Atlanta 1, Georgia

Dear Mac:

On October 1, I bring to an end my 30 years of service as Superintendent of Water Supply for the Town of Walhalla. Though I will no longer take an active part, City Council has requested that I serve in an advisory capacity to the department.

I am taking this opportunity to express to you and the entire Rockwell organization my grateful thanks for the cooperation and service extended me.

I recall the day I placed my first order for Pittsburgh Meters with your Mr. Taylor. That was 30 years ago. When you have exclusively used a product for that long, you really appreciate the quality and dependability built into your meters and I have never once had reason to question my choice.

Mr. C. L. Walling, Assistant Superintendent since 1938, has been designated as my successor. I am glad to state that Mr. Walling will continue to use your meters because of their proven merit and performance.

In closing, may I again express my gratitude for the years of courteous service. To you and your entire organization my best wishes for continued success.

Sincerely,

J. F. Bearden
J. F. Bearden



The Symbol for Service, Quality
and Performance in Water Meters

ROCKWELL MANUFACTURING COMPANY

PITTSBURGH 8, PA. Atlanta Boston Chicago Houston Los Angeles
N. Kansas City New York Pittsburgh San Francisco Seattle Tulsa

(Continued from page 66)

Federal Pipe & Tank Co.

Hays Mfg. Co.

Jones, James, Co.

Kelly Pipe Co.

McDonald, A. Y., Mfg. Co.

Mueller Co.

Terminal City Iron Works, Ltd.

Welsbach Corp., The

Compressors; see Air Compressors**Contractors, Well Drilling**

Baker, G. M., & Son, Inc.

Carloss Well Supply Co.

Diehl Pump & Supply Co., Inc.

Keys Well Drilling Co.

Layne-Atlantic Co.

McCarthy Well Co.

Miller, J. P., Artesian Well Co.

Ohio Drilling Co.

Pennsylvania Drilling Co.

Rinbrand Well Drilling Co.

Texas Water Wells, Inc.

Varner Well Drilling Co., Inc.

Controllers, Liquid Level

Bristol Co., The

Builders-Providence, Inc.

Cla-Val Co.

Consolidated Electric Co.

Cutler-Hammer, Inc.

Fischer & Porter Co.

Foxboro Co., The

Inflico, Inc.

Natural Gas Equipment, Inc.

Ross Valve Mfg. Co.

Sparling Meter Co.

Westinghouse Electric Corp.

Controllers, Motor and Electric

Allis-Chalmers Mfg. Co.

Bristol Co., The

Cutler-Hammer, Inc.

General Electric Co.

Westinghouse Electric Corp.

Controllers, Pressure

Bristol Co., The

Cla-Val Co.

Cutler-Hammer, Inc.

Fischer & Porter Co.

Foster Eng. Co.

Foxboro Co., The

Mueller Co.

Natural Gas Equipment, Inc.

Ross Valve Mfg. Co.

Controllers, Rate of Flow

Bristol Co., The

Builders-Providence, Inc.

Cla-Val Co.

Filtration Equipment Corp.

Fischer & Porter Co.

Foster Eng. Co.

Foxboro Co., The

Inflico, Inc.

Simplex Valve & Meter Co.

Sparling Meter Co.

Conveyors

American Pipe & Construction Co.

American Well Works

Builders-Providence, Inc.

Chain Belt Co.

Jeffrey Mfg. Co., The

Link-Belt Co.

Morse Bros. Machinery Co.

Stuart Corp.

Copper Sulfate

American Oil & Supply Co.

Barada & Page, Inc.

Flox Co., Inc., The

Lyon Chemicals, Inc.

Pioneer Salt Co.

Corrosion Control; see Cathodic

Protection; Coating and Lining;

Inhibitors

Couplings, Flexible

Baker, R. H., & Co., Inc.

Chain Belt Co.

Dresser Mfg. Div.

Hydraulic Supply Mfg. Co.

Industrial Iron Works

Jeffrey Mfg. Co., The

Koppers Co., Inc.

Smith-Blair, Inc.

Utility Clamp & Equipment Co.

Curb Boxes (see also Meter Boxes)

American Foundry & Mfg. Co.

Art Concrete Works

Atlas Foundry & Machine Co.

Bingham & Taylor Corp.

Buffalo Pipe & Foundry Corp.

Carson, H. Y., Co.

Central Foundry Co., The

Chapman Valve Mfg. Co., The

Clark, H. W., Co.

Clow, James B., & Sons

Concrete Products & Roofing Co.

Darling Valve & Mfg. Co.

Dayton Foundry

Dewey Bros., Inc.

Eddy Valve Co.

Filtration Equipment Corp.

Forni, George P.

Hays Mfg. Co.

Industrial Iron Works

Kennedy Valve Mfg. Co., The

Ludlow Valve Mfg. Co., Inc., The

M & H Valve & Fittings Co.

McDonald, A. Y., Mfg. Co.

Mueller Co.

Pacific States Cast Iron Pipe Co.

Rensselaer Valve Co.

Rich Mfg. Co. of California

San Antonio Machine & Supply Co.

Sherman Machine & Iron Works

Smith, A. P., Mfg. Co.

Stuart Corp.

Taylor Foundry Co.

Terminal City Iron Works, Ltd.

Trinity Valley Iron & Steel Co.

Vogt Mfg. Co.

Waterous Co.

Western Metal Products Co.

Wood, R. D., Co.

Decorators

American Well Works

Belco Industrial Equipment Div.

Bird-Archer Co., Ltd., The

Cochrane Corp.

Graver Water Conditioning Co.

Illinois Water Treatment Co.

Inflico, Inc.

Inglis, John, Co., Ltd.

Maintenance Engineering Corp.

Permutit Co., The

Walker Process Equipment, Inc.

Worthington Corp.

Dechlorinating Agents

Belco Industrial Equipment Div.

General Chemical Div., Allied Chem-

ical & Dye Corp.

Graver Water Conditioning Co.

Inflico, Inc.

Permutit Co., The

Salomon, L. A., & Bros.

Deminerallizers; see Ion Exchange;

Softeners

Diaphragms, Pump

Carloss Well Supply Co.

Carter, Ralph B., Co.

Dorr Co., The

Fadden Pump Co.

Jaeger Machine Co., The

Morse Bros. Machinery Co.

Pollard, Joseph G., Co., Inc.

Proportioners, Inc.

Distribution System Analyzers;

see Analyzers

Drills, Well

Carloss Well Supply Co.

McCarthy Well Co.

Electric Generators; see Genera-

tors

Electric Motors; see Motors**Engines, Internal Combustion**

Fairbanks, Morse & Co.

Homelite Corp.

Worthington Corp.

Ferrie Salts; see Iron Salts**Ferrous Salts; see Iron Salts****Filter Agitators**

American Water Softener Co.

Inflico, Inc.

Leopold, F. B., Co., Inc.

Maintenance Engineering Corp.

Stuart Corp.

Filter Bottoms

Bacharach, E. W., Inc.

Builders-Providence, Inc.

Carborundum Co., The

Filtration Equipment Corp.

Inflico, Inc.

Leopold, F. B., Co., Inc.

Roberts Filter Mfg. Co.

Stuart Corp.

Walker Process Equipment, Inc.

Filter Media

American Water Softener Co.

Bacharach, E. W., & Co.

Graver Water Conditioning Co.

Inflico, Inc.

Johns-Manville Sales Corp.

Maintenance Engineering Corp.

Permutit Co., The

Roberts Filter Mfg. Co.

Stuart Corp.

Filters, Diatomite

Belco Industrial Equipment Div.

Bird-Archer Co., Ltd., The

Cochrane Corp.

General Filter Co.

Graver Water Conditioning Co.

Grinnell Co., Inc.

Inflico, Inc.

Johns-Manville Sales Corp.

Klenzade Products, Inc.

Layne & Bowler, Inc.

Maintenance Engineering Corp.

Permutit Co., The

Proportioners, Inc.

Refinite Corp.

Filters, Molecular; see Molecular

Filter

Filters, Pressure

American Water Softener Co.

Automatic Pump & Softener Corp.

Bacharach, E. W., & Co.

Belco Industrial Equipment Div.

Bird-Archer Co., Ltd., The

Cochrane Corp.

Culligan Zeolite Co.

Everson Mfg. Co.

General Filter Co.

Graver Water Conditioning Co.

Illinois Water Treatment Co.

Inflico, Inc.

Layne & Bowler, Inc.

Maintenance Engineering Corp.

Permutit Co., The

Refinite Corp.

Roberts Filter Mfg. Co.

Finders, Pipe; see Pipe Locators

(Continued on page 70)




New York's City Hall, completed in 1811, as it looked 100 years ago

The City of New York has several cast iron water mains in service that were laid more than a century ago. They are part of approximately 5,000 miles of cast iron mains representing about 98% of all the pipe in New York's distribution system. The contrast in traffic and construction, above and underground, today and 100 years ago, is fantastic. Yet the shock-strength, crushing-strength and beam-strength of cast iron mains have enabled them to withstand the unforeseen stresses imposed by vast changes. Because of these strength factors and effective resistance to corrosion, cast iron water and gas mains laid over 100 years ago, are still serving in the streets of 38 cities in the United States and Canada.

United States Pipe and Foundry Co.,
General Office, 3300 First Ave., N.,
Birmingham 2, Ala. • Plants and Sales
Offices Throughout the U. S. A.

U.S. cast iron PIPE

FOR WATER, GAS, SEWERAGE
AND INDUSTRIAL SERVICE

 Our General Office is now
located in Birmingham, Ala.,
instead of Burlington, N. J.

(Continued from page 68)

Fish Screens

Mueller Co.
Ross Valve Mfg. Co.

Fittings; see Pipe Fittings**Flocculators; see Coagulators****Flumes**

Babcock & Wilcox Co., The
Bethlehem Steel Co.
Consolidated Western Steel Corp.
Federal Pipe & Tank Co.
Republic Steel Corp.
Simplex Valve & Meter Co.
Taylor Forge & Pipe Works

Fluoride Chemicals

American Oil & Supply Co.
Barada & Page, Inc.
General Chemical Div., Allied Chemical & Dye Corp.

Fluoride Feeders

Grinnell Co., Inc.
Omega Machine Co.
Proportioners, Inc.
Wallace & Tiernan Co., Inc.

Furnaces

Crane Co.
Fairbanks, Morse & Co.
Morse Boulder Destructor Co.
Natural Gas Equipment, Inc.
Phipps & Bird, Inc.
Pollard, Joseph G., Inc.
Taylor Forge & Pipe Works

Furnaces, Joint Compound

Hydraulic Development Corp.
Northrop & Co., Inc.
Pollard, Joseph G., Co., Inc.

Gages; see also Manometers; Meters**Gages, Hydrant Flow**

Pollard, Joseph G., Co., Inc.

Gages, Liquid Level

Bristol Co., The
Builders-Providence, Inc.
Fischer & Porter Co.
Foxboro Co., The
Inflico, Inc.
Simplex Valve & Meter Co.

Gages, Loss of Head

Bristol Co., The
Builders-Providence, Inc.
Foxboro Co., The
Inflico, Inc.
Simplex Valve & Meter Co.

Gages, Pressure and Vacuum

Bristol Co., The
Fischer & Porter Co.
Foxboro Co., The
General Electric Co.
Plumb, D. S., Co., Inc.

Gages, Rate of Flow

Badger Meter Mfg. Co.
Bristol Co., The
Builders-Providence, Inc.
Fischer & Porter Co.
Foxboro Co., The
Inflico, Inc.
Simplex Valve & Meter Co.

Gages, Sand Expansion

Builders-Providence, Inc.
Foxboro Co., The
Inflico, Inc.
Simplex Valve & Meter Co.

Gaskets and Packing

Atlas Mineral Products Co., The
Baker, R. H. & Co., Inc.
Clow, James B. & Sons
Johns-Manville Sales Corp.

Mabbs Hydraulic Packing Co.
Northrop & Co., Inc.

Gates, Shear and Sluice

Armco Drainage & Metal Products, Inc.
Chapman Valve Mfg. Co., The
Clow, James B. & Sons
Filtration Equipment Corp.
Grinnell Co., Inc.
Industrial Iron Works
Ludlow Valve Mfg. Co., Inc., The
M & H Valve & Fittings Co.
Morse Bros. Machinery Co.
Mueller Co.
Traverse City Iron Works
Vogt Mfg. Co.

Gears, Speed-Reducing

Fairbanks, Morse & Co.
Westinghouse Electric Corp.
Worthington Corp.

Gelger Counters; see Radiation Detectors**Generators, Electric**

Allis-Chalmers Mfg. Co.
Fairbanks, Morse & Co.
General Electric Co.
Homelite Corp.
Westinghouse Electric Corp.
Worthington Corp.

Glass Standards, Colorimetric

Hellige, Inc.
Klett Mfg. Co.
Wallace & Tiernan Co., Inc.

Goosenecks

Carson, H. Y., Co.
Clow, James B. & Sons
Farnam Brass Works Co., The
Hays Mfg. Co.
Jones, James Co.
McDonald, A. Y., Mfg. Co.
Mueller Co.
Red Hed Mfg. Co.

Gravel; see Filter Materials**Greensand; see Ion Exchange****Hose, Suction and Discharge**

Everson Mfg. Co.

Hydrants, Fire

American Foundry & Mfg. Co.
Bourbon Copper & Brass Works Co.
Chapman Valve Mfg. Co., The
Clow, James B. & Sons
Darling Valve & Mfg. Co.
Eddy Valve Co.
Greenberg's, M., Sons
Grinnell Co., Inc.
Iowa Valve Co.
Jones, James Co.
Kennedy Valve Mfg. Co., The
Ludlow Valve Mfg. Co., Inc., The
M & H Valve & Fittings Co.
Mueller Co.
Pacific States Cast Iron Pipe Co.
Rensselaer Valve Co.
Rich Mfg. Co. of California
Ross Valve Mfg. Co.
Smith, A. P., Mfg. Co., The
Smith-Scott Co.
Terminal City Iron Works, Ltd.
Traverse City Iron Works
Vogt Mfg. Co.
Watrous Co.
Wood, R. D., Co.

Hydrants, Sprinkling and Flushing

American Foundry & Mfg. Co.
Greenberg's, M., Sons
Smith, A. P., Mfg. Co., The
Vogt Mfg. Co.

Hydrogen Ion Equipment

American Water Softener Co.
Automatic Pump & Softener Corp.
Bristol Co., The
Cochrane Corp.
Everson Mfg. Corp.
General Filter Co.
Hellige, Inc.
Inflico, Inc.
Jones, John Wiley, Co.
Klenzade Products, Inc.
LaMotte Chemical Products Co.
McCarthy Well Co.
Morse Boulder Destructor Co.
Omega Machine Co.
Phipps & Bird, Inc.
Proportioners, Inc.
Refinite Corp.
Sterne & Maley Co.
Wallace & Tiernan Co., Inc.
Water Works Supply Co.

Hypochlorite; see Calcium; Sodium**Inhibitors**

Calgon, Inc.
Consolidated Chemical Industries, Inc.
Flox Co., Inc., The
Haering, D. W. & Co., Inc.
Maintenance Engineering Corp.
Kelly Tar & Chemical Corp.

Inserting Machines, Valve and Fitting

Ludlow Valve Mfg. Co., Inc., The
Mueller Co.
Smith, A. P., Mfg. Co., The
Welsbach Corp., The

Instruments, Indicating and Recording

Bristol Co., The
Builders-Providence, Inc.
Everson Mfg. Co.
Fischer & Porter Co.
Foxboro Co., The
General Electric Co.
Inflico, Inc.
Permutit Co., The
Phipps & Bird, Inc.
Sparling Meter Co.
Westinghouse Electric Corp.

Insulation

Barrett Div., The, Allied Chemical & Dye Corp.
Bird-Archer Co., Ltd., The
Johns-Manville Sales Corp.
Keesbey & Mattison Co.
Owens-Corning Fiberglas Corp.

Ion-Exchange Materials

Allis-Chalmers Mfg. Co.
American Water Softener Co.
Automatic Pump & Softener Corp.
Belco Industrial Equipment Div.
Bird-Archer Co., The
Bird-Archer Co., Ltd., The
Culligan Zeolite Co.
Graver Water Conditioning Co.
Illinois Water Treatment Co.
Inflico, Inc.
Maintenance Engineering Corp.
National Aluminate Corp.
Permutit Co., The
Refinite Corp.

Iron Removal Plants

Allis-Chalmers Mfg. Co.
American Water Softener Co.
American Well Works
Bacharach, E. W. & Co.
Bird-Archer Co., Ltd., The
Dorr Co., The
General Filter Co.
Graver Water Conditioning Co.
Illinois Water Treatment Co.

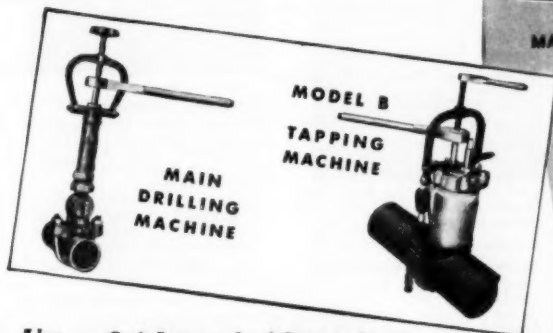
(Continued on page 72)



OVER 80 years of manufacturing experience . . . designed for easy installation . . . long years of trouble-free service . . . interchangeable with those of other manufacturers . . . Hays Corporation Stops can be installed with any standard tapping machine.

All Hays fittings made of single, uniform, high quality water service bronze, 85-5-5 mix . . . hydrostatically tested at 200 pounds or more . . . plugs individually ground in for perfect fit . . . specially lubricated for permanent easy turning.

The items shown are only a few of the Hays complete line of Water Service Products illustrated in our latest catalog. Write for your copy.



Also . . . Curb Boxes • Lead Goosenecks •
Fittings • Adaptors • Y Branch Connectors.

HAYS MANUFACTURING COMPANY

12 TH & LIBERTY STREETS, ERIE, PENNA., U. S. A.



CORPORATION STOP



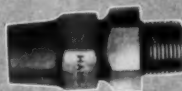
DUO-STOP
CORPORATION STOP
and SADDLE COMBINED



ROUNDWAY CURB STOP
and DRAIN



INVERTED PLUG
CURB STOP



MALE ADAPTOR



UNION



MALE
ELBOW

(Continued from page 70)

Inflico, Inc.
Leopold, F. B., Co., Inc.
Maintenance Engineering Corp.
Permuto Co., The
Refinite Corp.
Roberts Filter Mfg. Co.
Walker Process Equipment, Inc.

Iron Salts
Barada & Page, Inc.
Great Western Div., Dow Chemical Co.
Lyon Chemicals, Inc.

Jointing Materials
Atlas Mineral Products Co., The
Barrett Div., The Allied Chemical & Dye Corp.
Belmont Smelting & Refining Works
Carson, H. Y., Co.
Hayman, Michael, & Co., Inc.
Hydraulic Development Corp.
Johns-Manville Sales Corp.
Kearsey & Mattison Co.
Koppers Co., Inc.
Leadite Co., Inc., The
Northrop & Co., Inc.

Jointing Tools
Hydraulic Development Corp.
Northrop & Co., Inc.
Pollard, Joseph G., Co., Inc.

Joints, Mechanical, Pipe
American Cast Iron Pipe Co.
Baker, R. H., & Co., Inc.
Central Foundry Co., The
Clow, James B., & Sons
Consolidated Western Steel Corp.
Dresser Mfg. Div.
Glamorgan Pipe & Foundry Co.
Industrial Iron Works
McWane Cast Iron Pipe Co.
Multiplex Mfg. Co.
Pacific States Cast Iron Pipe Co.
Smith-Scott Co.
Stuart Corp.
Trinity Valley Iron & Steel Co.
Warren Foundry & Pipe Corp.

Laboratory Apparatus
Fischer & Porter Co.
Hellige, Inc.
Klett Mfg. Co.
LaMotte Chemical Products Co.
Maintenance Engineering Corp.
Phipps & Bird, Inc.
Welsbach Corp., The, Ozone Processes Div.

Leak Detectors
Fisher Research Laboratory, Inc.
General Electric Co.
Goldak Co., The
Pollard, Joseph G., Co., Inc.

Lime
Arrowhead Lime & Chemical Co.
Barada & Page, Inc.
Cutler-Magner Co.
Limestone Products Corp. of America
McKesson & Robbins, Inc.
Menke Stone & Lime Co.
Mississippi Lime Co.

Lime Sinks and Feeders
Inflico, Inc.
Maintenance Engineering Corp.
Omega Machine Co.
Wallace & Tiernan Co., Inc.

Lining; see Coating and Lining

Locators, Pipe; see Pipe Locators

Magazines; see Publications

Magnesium Anodes
Electro Rust-Proofing Corp. (N.J.)
Harco Corp., Cathodic Protection Div.

Mains; see Pipe

Manometers

Bristol Co., The
Builders-Providence, Inc.
Everson Mfg. Co.
Fischer & Porter Co.
Inflico, Inc.
Simplex Valve & Meter Co.
Wallace & Tiernan Co., Inc.

Membrane Filters; see Molecular Filters

Meter Boxes

American Foundry & Mfg. Co.
Art Concrete Works
Atlas Foundry & Machine Co.
Bingham & Taylor Corp.
Carson, H. Y., Co.
Clark, H. W., Co.
Clow, James B., & Sons
Concrete Products & Roofing Co.
Dayton Foundry
Dewey Bros., Inc.
Ford Meter Box Co., Inc., The
Forni, George P.
Fraser Cement Products Co.
Industrial Iron Works
Mueller Co.
San Antonio Machine & Supply Co.
Sherman Machine & Iron Works
Trinity Valley Iron & Steel Co.
Well Machinery & Supply Co., Inc.

Meter Couplings and Yokes

Badger Meter Mfg. Co.
Baker, R. H., & Co., Inc.
Clark, H. W., Co.
Farnam Brass Works Co., The
Ford Meter Box Co., Inc., The
Hays Mfg. Co.
Hersey Mfg. Co.
Mueller Brass Co.
Mueller Co.
Multiplex Mfg. Co.
Neptune Meter Co.
Red Hed Mfg. Co.
Smith-Blair, Inc.
Well Machinery & Supply Co., Inc.
Welsbach Corp., The

Meter Parts

Badger Meter Mfg. Co.
Diehl Pump & Supply Co., Inc.
Hanks, Fred W., Co.
Hersey Mfg. Co.
Maintenance Engineering Corp.
Neptune Meter Co.
Pittsburgh Equitable Meter Div.,
Rockwell Mfg. Co.
Thomson Meter Co.

Meter Reading and Record Books

Badger Meter Mfg. Co.
Worthington-Gamon Meter Div.

Meter Testers

Badger Meter Mfg. Co.
Fischer & Porter Co.
Ford Meter Box Co., Inc., The
Hersey Mfg. Co.
Neptune Meter Co.

Meters; see also Gages

Meters, Water, Compound

Badger Meter Mfg. Co.
Fadden Pump Co.
Hersey Mfg. Co.
Neptune Meter Co.
Pittsburgh Equitable Meter Div.,
Rockwell Mfg. Co.
Rockwell Mfg. Co.
Sparling Meter Co.
Thomson Meter Co.
Well Machinery & Supply Co., Inc.

Worthington Corp.
Worthington-Gamon Meter Div.

Meters, Water, Current

Badger Meter Mfg. Co.
Builders-Providence, Inc.
Hersey Mfg. Co.
Neptune Meter Co.
Pittsburgh Equitable Meter Div.,
Rockwell Mfg. Co.
Rockwell Mfg. Co.
Sparling Meter Co.
Thomson Meter Co.
Worthington-Gamon Meter Div.

Meters, Water, Displacement

Badger Meter Mfg. Co.
Buffalo Meter Co.
Hersey Mfg. Co.
Neptune Meter Co.
Pittsburgh Equitable Meter Div.,
Rockwell Mfg. Co.
Thomson Meter Co.
Well Machinery & Supply Co., Inc.
Worthington Corp.
Worthington-Gamon Meter Div.

Meters, Water, Fire Service

Hersey Mfg. Co.
Neptune Meter Co.
Pittsburgh Equitable Meter Div.,
Rockwell Mfg. Co.

Meters, Water, Recording

Badger Meter Mfg. Co.
Bristol Co., The
Builders-Providence, Inc.
Fadden Pump Co.
Fischer & Porter Co.
Foxboro Co., The
Maintenance Engineering Corp.
Simplex Valve & Meter Co.
Sparling Meter Co.

Mixing Equipment

American Well Works, Inc., The
Bacharach, E. W., Inc.
Carter, Ralph B., Co.
Chain Belt Co.
Chicago Pump Co.
Dorr Co., The
Inflico, Inc.
Jeffrey Mfg. Co., The
Leopold, F. B., Co., Inc.
Link-Belt Co.
Phipps & Bird, Inc.
Stuart Corp.
Vogt Mfg. Co.
Walker Process Equipment, Inc.
Worthington Corp.

Molecular Filter Holders

Lovell Chemical Co.

Molecular Filter Membranes

Lovell Chemical Co.

Motors, Electric

Allis-Chalmers Mfg. Co.
Fadden Pump Co.
Fairbanks, Morse & Co.
General Electric Co.
Homelite Corp.
Morse Bros. Machinery Co.
Westinghouse Electric Corp.
Worthington Corp.

Office Equipment

Burroughs Adding Machine Co.
Remington Rand Inc.

Ozonation Equipment

Stuart Corp.
Welsbach Corp., The, Ozone Processes Div.

Packing; see Gaskets and Packing

Paints

Barrett Div., The, Allied Chemical & Dye Corp.

(Continued on page 74)

HORTON STEEL TANKS

for Municipal Service



500,000-gal. radial-cone elevated tank, 90 ft. to bottom in Cleveland, O., water system.



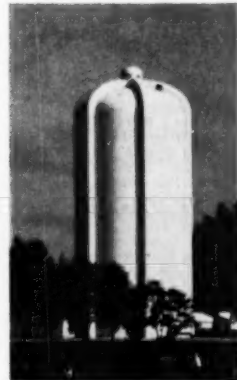
Watersphere with a capacity of 150,000-gals., at Wooster, Tex. It is 100 ft. to the bottom.



500,000-gal. welded ellipsoidal elevated tank, 87 ft. to bottom at Park Forest, Ill.



1,250,000-gal. standpipe with ellipsoidal roof in Biddleford, Me., water system.



2,500,000-gal. Horton-spheroidal elevated tank, 35-ft. range in head, at Cincinnati, O.



1,000,000-gal. ornamental standpipe, 43 ft. diam. by 95 ft. high at Clearwater, Fla.

ELEVATED TANKS WATERSPHERES RESERVOIRS

Write our nearest office for complete information or estimating figures on steel tanks for municipal service.

CHICAGO BRIDGE & IRON COMPANY

BIRMINGHAM
PHILADELPHIA
SAN FRANCISCO

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HOUSTON

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DETROIT
ATLANTA

BOSTON
SEATTLE
HAVANA

CLEVELAND
LOS ANGELES
PITTSBURGH

Plants in Birmingham, Chicago, Salt Lake City and Greenville, Pa.

(Continued from page 72)

Craftsmen Painting Service
Dixon, Joseph, Crucible Co.
Gerge Co., The
Inertol Co., Inc.
Pittsburgh Coke & Chemical Co.
Simmer, W. R., Co.
Steel Protection & Chemical Co., Inc.

Pavement Breakers

Lindsay, P. K., Co.
Phipps & Bird, Inc.
Worthington Corp.

Photometers

Flox Co., Inc., The
Hellige, Inc.
Klett Mfg. Co.
Phipps & Bird, Inc.

Pipe, Asbestos-Cement

Johns-Manville Sales Corp.
Kearbey & Mattison Co.
Smith-Scott Co.

Pipe, Brass

American Brass Co., The
Bridgeport Brass Co.
Wolverine Tube Div., Calumet & Hecla Consolidated Copper Co.

Pipe, Cast-Iron

American Cast Iron Pipe Co.
Central Foundry Co., The
Clow, James B., & Sons
Glamorgan Pipe & Foundry Co.
Industrial Iron Works
Lone Star Steel Co.
Lynchburg Foundry Co.
McWane Cast Iron Pipe Co.
Pacific States Cast Iron Pipe Co.
Smith-Scott Co.
U.S. Pipe & Foundry Co.
Warren Foundry & Pipe Corp.
Wood, R. D., Co.

Pipe, Concrete

American Pipe & Construction Co.
B.C. Concrete Co., Ltd.
Concrete Conduit Co.
Gifford-Hill-American, Inc.
Lock Joint Pipe Co.
Preload Co., Inc., The
Price Brothers Co.
United Concrete Pipe Corp.

Pipe, Copper

American Brass Co., The
Bridgeport Brass Co.
Jones, James, Co.
Mueller Brass Co.
Mueller Co.
Revere Copper & Brass, Inc.
Wolverine Tube Div., Calumet & Hecla Consolidated Copper Co.

Pipe, Lead and Lead-Lined

Belmont Smelting & Refining Works
Hayman, Michael, & Co., Inc.
Lead Lined Pipe Co.

Pipe, Plastic

Carlson Well Supply Co.
Republic Supply Co. of California
Smith-Scott Co.

Pipe, Steel

American Pipe & Construction Co.
Armco Drainage & Metal Products, Inc.
Babcock & Wilcox Co., The
Bethlehem Steel Co.
Carlson Well Supply Co.
Consolidated Western Steel Corp.
Dominion Bridge Co.
Hydraulic Supply Mfg. Co., Inc.
Kelly Pipe Co.
Maintenance Engineering Corp.

Pratt, Henry, Co.
Republic Steel Corp.
Smith-Scott Co.
Southern Pipe & Casing Co.
Taylor Forge & Pipe Works
Wolverine Tube Div., Calumet & Hecla Consolidated Copper Co.

Pipe, Wood

Federal Pipe & Tank Co.
Morse Bros. Machinery Co.

Pipe, Wrought-Iron

Byers, A. M., Co.
Hydraulic Supply Mfg. Co.
Taylor Forge & Pipe Works

Pipe Cleaning

Flexible Sewer-Rod Equipment Co.
G & M Duct Cleaning & Rust Proofing Corp.

Hill, Hubbell & Co., Div. General Paint Corp.

Hydraulic Supply Mfg. Co., Inc.
Kelly Pipe Co.
National Water Main Cleaning Co.
Pittsburgh Pipe Cleaner Co.

Pipe Coating and Lining; see
Coating and Lining

Pipe Cutting Machines

Baker, R. H., & Co., Inc.
Carson, H. Y., Co.
Eddy Valve Co.
Ellis & Ford Mfg. Co.
Flexible Sewer-Rod Equipment Co.
Kelly Pipe Co.
Smith, A. P., Mfg. Co., The
Wachs, E. H., Co., The

Pipe Fittings, Distribution

American Cast Iron Pipe Co.
American Foundry & Mfg. Co.
Armco Drainage & Metal Products, Inc.

Atlas Foundry & Machine Co.
Baker, R. H., & Co., Inc.
Carson, H. Y., Co.
Clow, James B., & Sons
Consolidated Western Steel Corp.
Crane Co.
Dayton Foundry
Farnan Brass Works Co., The
Gifford-Hill-American, Inc.
Glamorgan Pipe & Foundry Co.
Grinnell Co., Inc.
Industrial Iron Works

Kelly Pipe Co.
Kennedy Valve Mfg. Co., The
Lead Lined Pipe Co.

Lone Star Steel Co.
Lynchburg Foundry Co.
M & H Valve & Fittings Co.
McWane Cast Iron Pipe Co.
Pacific States Cast Iron Pipe Co.

Pratt, Henry, Co.
Reliable Iron Foundry, Inc.
San Antonio Machine & Supply Co.
Sherman Machine & Iron Works
Smith-Blair, Inc.

Smith-Scott Co.
Stuart Corp.
Taylor Forge & Pipe Works
Taylor Foundry Co.
Terminal City Iron Works, Ltd.
Traverse City Iron Works
Trinity Valley Iron & Steel Co.
U.S. Pipe & Foundry Co.
Warren Foundry & Pipe Corp.
Wood, R. D., Co.

Pipe Fittings, Service

American Brass Co., The
Baker, R. H., & Co., Inc.
Carson, H. Y., Co.
Farnan Brass Works Co., The
Hays Mfg. Co.

Jones, James, Co.
McDonald, A. Y., Mfg. Co.
Mueller Brass Co.
Mueller Co.
Red Hed Mfg. Co.
Taylor Forge & Pipe Works

Pipe Jointing Materials; see
Jointing Materials

Pipe Joints, Mechanical; see
Joints

Pipe Locators

Fisher Research Lab., Inc.
Goldak Co., The
Pollard, Joseph G., Co., Inc.

Pitot Recorders

Foxboro Co., The

Plugs, Removable

Clow, James B., & Sons
Smith, A. P., Mfg. Co., The

Potentiometers; see Meters, Electric

Pressure Regulators; see Controllers

Primers, Pump

Chicago Pump Co.
Dixon, Joseph, Crucible Co.
Natural Gas Equipment, Inc.

Protective Coating; see Coating

Publications

American City, The
Engineering News-Record
Municipal Utilities
Public Works
Water & Sewage Works
Water Works Engineering
Western City

Pumps, Centrifugal

Allis-Chalmers Mfg. Co.
American Well Works
Aurora Pump Co.
Carlson Well Supply Co.
Carter, Ralph B., Co.
Chain Belt Co.
Chicago Pump Co.
De Laval Steam Turbine Co.
Diehl Pump & Supply Co., Inc.
Fadden Pump Co.
Fairbanks, Morse & Co.
Flexible Sewer-Rod Equipment Co.
Homelite Corp.
Inglis, John, Co., Ltd.
Jaeger Machine Co., The
Lead Lined Pipe Co.
Miller, J. P., Artesian Well Co.
Peerless Pump Div., Food Machinery & Chemical Corp.
Worthington Corp.

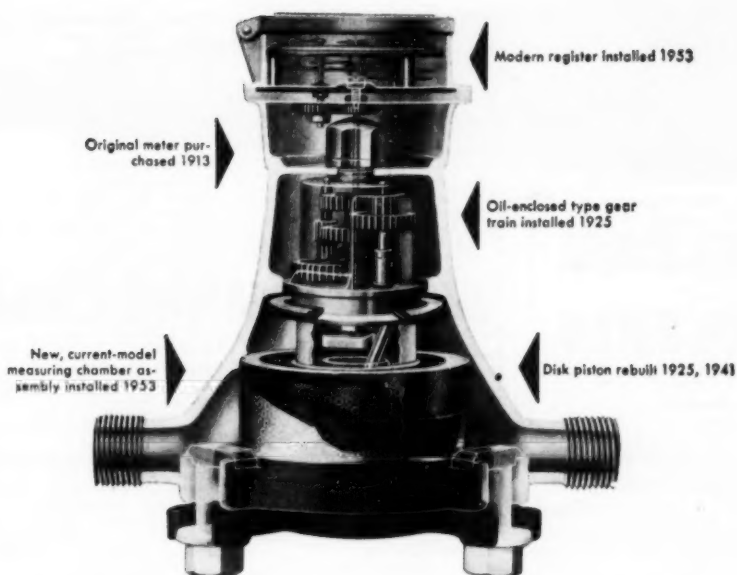
Pumps, Chemical Feed

Bird-Archer Co., The
Bird-Archer Co., Ltd., The
Electric Chemical Co.
Fadden Pump Co.
Klenzade Products, Inc.
Peerless Pump Div., Food Machinery & Chemical Corp.
Proportioners, Inc.
Wallace & Tiernan Co., Inc.
Worthington Corp.

Pumps, Deep Well

American Well Works, Inc., The
Aurora Pump Co.
Carlson Well Supply Co.
Diehl Pump & Supply Co., Inc.
Fadden Pump Co.
Fairbanks, Morse & Co.
Inglis, John, Co., Ltd.
Johnston Pump Co.

(Continued on page 76)



HOW *OLD* IS THIS METER?

It was built in 1913... but it's almost as new as today. Its working parts have been completely replaced. Its performance matches every standard of modern metering practice.

The parts used to repair this meter at its last overhaul are identical to those used in the latest Trident meters.

Making modern parts fit "old" meters has been a fixed Neptune policy for over 50 years. It is just one of the extra advantages that make Tridents a better buy... both for today and for the years to come.

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NEPTUNE METERS, LTD.
1430 Lakeshore Road, Toronto 14, Ontario
Branch Offices in Principal
American and Canadian Cities



(Continued from page 74)

Keys Well Drilling Co.
Lauman, C. W., & Co., Inc.
Layne & Bowler, Inc.
Layne-Atlantic Co.
McCarthy Well Co.
McDonald, A. Y., Mfg. Co.
Miller, J. P., Artesian Well Co.
Peerless Pump Div., Food Machinery
& Chemical Corp.
Pennsylvania Drilling Co.
Texas Water Wells, Inc.
Varner Well Drilling Co., Inc.

Pumps, Diaphragm
Carloss Well Supply Co.
Carter, Ralph B., Co.
Chain Belt Co.
Diehl Pump & Supply Co., Inc.
Dorr Co., The
Fadden Pump Co.
Grinnell Co., Inc.
Jaeger Machine Co., The
Klenzade Products, Inc.
Pollard, Joseph G., Co., Inc.
Proportioners, Inc.
Wallace & Tiernan Co., Inc.

Pumps, Hydrant
Chicago Pump Co.
Pollard, Joseph G., Co., Inc.

Pumps, Hydraulic Booster
Chicago Pump Co.
De Laval Steam Turbine Co.
Diehl Pump & Supply Co., Inc.
Fairbanks, Morse & Co.
Flexible Sewer-Rod Equipment Co.
Inglis, John, Co., Ltd.
Johnston Pump Co.
Ross Valve Mfg. Co.

Pumps, Plunger Sludge
Carter, Ralph B., Co.
Chicago Pump Co.
Diehl Pump & Supply Co., Inc.
Dorr Co., The
Fadden Pump Co.
Fairbanks, Morse & Co.
McDonald, A. Y., Mfg. Co.

Pumps, Portable
Carloss Well Supply Co.
Carter, Ralph B., Co.
Chain Belt Co.
Chicago Pump Co.
Diehl Pump & Supply Co., Inc.
Fadden Pump Co.
Homelite Corp.
Inglis, John, Co., Ltd.
Jaeger Machine Co., The
Peerless Pump Div., Food Machinery
& Chemical Corp.
Worthington Corp.

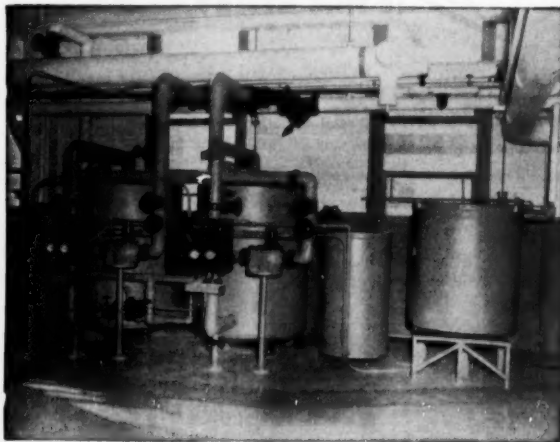
Pumps, Sewage
Allis-Chalmers Mfg. Co.
American Well Works, Inc., The
Aurora Pump Co.
Carter, Ralph B., Co.
Chicago Pump Co.
De Laval Steam Turbine Co.
Diehl Pump & Supply Co., Inc.
Fadden Pump Co.
Fairbanks, Morse & Co.
Homelite Corp.
Inglis, John, Co., Ltd.
Peerless Pump Div., Food Machinery
& Chemical Corp.
Smith, S. Morgan, Co.
Worthington Corp.

Pumps, Submersible
Carloss Well Supply Co.
Fadden Pump Co.
Keys Well Drilling Co.
Lauman, C. W., & Co., Inc.
McDonald, A. Y., Mfg. Co.
Miller, J. P., Artesian Well Co.
Peerless Pump Div., Food Machinery
& Chemical Corp.

Pumps, Sump
Aurora Pump Co.
Carloss Well Supply Co.
Chicago Pump Co.
Diehl Pump & Supply Co., Inc.
Fadden Pump Co.
Fairbanks, Morse & Co.
Inglis, John, Co., Ltd.
Johnston Pump Co.
McDonald, A. Y., Mfg. Co.
Peerless Pump Div., Food Machinery
& Chemical Corp.
Worthington Corp.

Pumps, Turbine
American Well Works, Inc., The
Aurora Pump Co.
Carloss Well Supply Co.
Diehl Pump & Supply Co., Inc.
Fadden Pump Co.
Fairbanks, Morse & Co.
Inglis, John, Co., Ltd.
Johnston Pump Co.
Keys Well Drilling Co.
Layne & Bowler, Inc.
Miller, J. P., Artesian Well Co.
Peerless Pump Div., Food Machinery
& Chemical Corp.
Pennsylvania Drilling Co.

(Continued on page 78)



Water Softening & Iron Removal* Deluxe

**JUST WHAT YOU'VE
BEEN WAITING FOR—**

Complete Water
Softening

Complete Iron
Removal*

Fully Automatic
Operation

All in one single,
compact, highly
efficient water
conditioning plant

Low in cost too—

*Including H₂S removal
when required

Write for **FREE Bulletin**

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SERVICE

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CLAYTON 5, NEW JERSEY



Here's Reference Data for

ARMCO STEEL WATER PIPE

When you need water supply lines and force mains, here is a handy guide to the advantages of Armco Steel Water Pipe.

METHOD OF MANUFACTURE—Armco Steel Pipe meets AWWA Specifications C-201 and C-203. Continuous spiral seam weld is as strong as the pipe itself. Pressure test data is available.

SIZES AND LENGTHS—Lengths up to 50 feet. Twenty different diameters from 6 to 36 inches. Wall thicknesses range from $\frac{3}{16}$ - to $\frac{1}{2}$ -inch, with 8 intermediate thicknesses.

COATINGS AND LININGS—Spun coal-tar linings and outside protective coatings meet AWWA Specifications C-203 and C-204.

FLOW CAPACITY— $C=150$ to 160. Spun enamel lining assures continuing high flow capacity.

FITTINGS—Standard and special fittings are prefabricated for quick, easy installation.

END FINISH—A dozen different end finishes are available. Pipe ends can be flanged, beveled for field welding, prepared for Dresser couplings, or otherwise finished to meet your need.

FACTORY TESTED—Every foot of Armco Steel Water Pipe is inspected and hydrostatically tested before it is shipped.

Write for complete data. Armco Drainage & Metal Products, Inc., Welded Pipe Sales Division, 4203 Curtis Street, Middletown, Ohio. Subsidiary of Armco Steel Corporation.

Armco Welded Steel Pipe



(Continued from page 76)

Smith, S. Morgan, Co.
Varner Well Drilling Co., Inc.
Worthington Corp.

Radiation Detectors
Phipps & Bird, Inc.

Recarbonators; see Carbon Dioxide Generators

Recording Instruments
Bristol Co., The
Builders-Providence, Inc.
Fischer & Porter Co.
Foxboro Co., The
General Electric Co.
Permutit Co., The
Phipps & Bird, Inc.
Simplex Valve & Meter Co.

Regulators; see Controllers

Reservoirs; see Tanks

Rust Prevention; see Cathodic Protection; Coating and Lining; Inhibitors

Saddles, Service

Baker, R. H., & Co., Inc.
Clow, James B., & Sons
Dresser Mfg. Div.
Federal Pipe & Tank Co.
Jones, James, Co.
Lock Joint Pipe Co.
Skinner, M. B., Co.
Smith-Blair, Inc.
Smith-Scott Co.
Taylor Forge & Pipe Works
Terminal City Iron Works, Ltd.
Utility Clamp & Equipment Co.

Salt, see Sodium Chloride

Sand; see Filter Media

Sand Expansion Gages; see Gages

Sand Washers and Separators
Consolidated Western Steel Corp.
Stuart Corp.

Screens (see also Fish Screens; Well Screens)

Chain Belt Co.
Dorr Co., The
Johnson, Edward E., Inc.
Walker Process Equipment, Inc.

Sedimentation Equipment

American Well Works, Inc., The
Bird-Archer Co., Ltd., The
Carter, Ralph B., Co.
Chain Belt Co.
Chicago Pump Co.
Dorr Co., The
Graver Water Conditioning Co.
Inflico, Inc.
Stuart Corp.
Walker Process Equipment, Inc.

Service Boxes; see Curb Boxes; Meter Boxes

Sleeves

Baker, R. H., & Co., Inc.
Bingham & Taylor Corp.
Carson, H. Y., Co.
Clow, James B., & Sons
Dresser Mfg. Div.
Eddy Valve Co.
Industrial Iron Works
McWane Cast Iron Pipe Co.
Mueller Co.
Rensselaer Valve Co.
Smith-Blair, Inc.
Taylor Forge & Pipe Works
Taylor Foundry Co.
Terminal City Iron Works, Ltd.
Warren Foundry & Pipe Corp.
Wood, R. D., Co.

Sleeves and Valves, Tapping

American Pipe & Construction Co.
Clow, James B., & Sons
Darling Valve & Mfg. Co.
Dresser Mfg. Div.
Eddy Valve Co.
Industrial Iron Works
Ludlow Valve Mfg. Co., Inc., The
M & H Valve & Fittings Co.
Mueller Co.
Rensselaer Valve Co.
Sherman Machine & Iron Works
Smith, A. P., Mfg. Co., The
Smith-Blair, Inc.
Traverse City Iron Works
Vogt Mfg. Co.

Sludge Blanket Equipment

American Well Works
Belco Industrial Equipment Div.
Bird-Archer Co., Ltd., The
Cochrane Corp.
Dorr Co., The
Graver Water Conditioning Co.
Inflico, Inc.
Maintenance Engineering Corp.
Permutit Co., The
Stuart Corp.
Walker Process Equipment, Inc.

Soda Ash (Sodium Carbonate)

American Cyanamid Co.
American Oil & Supply Co.
Barada & Page, Inc.
Diamond Alkali Co.
Jones, John Wiley, Co.
Lyon Chemicals, Inc.
Mathieson Chemical Corp.
Pioneer Salt Co.
Pittsburgh Plate Glass Co., Columbia-
Southern Chemical Corp.

Sodium Aluminate

Barada & Page, Inc.
Culligan Zeolite Co.
Electric Chemical Co.
Flox Co., Inc., The
National Aluminate Corp.

Sodium Chloride

American Oil & Supply Co.
Cutler-Magner Co.
Hardy Salt Co.
International Salt Co., Inc.
Morton Salt Co.
Pioneer Salt Co.

Sodium Chlorite

Mathieson Chemical Corp.
Pioneer Salt Co.

Sodium Hexametaphosphate

Alexander Chemical Corp.
American Oil & Supply Co.
Barada & Page, Inc.
Calgon, Inc.
Flox Co., Inc., The
Klenzade Products, Inc.
Maintenance Engineering Corp.
National Aluminate Corp.

Sodium Hydroxide; see Caustic Soda

Sodium Hypochlorite

Alexander Chemical Corp.
American Oil & Supply Co.
Barada & Page, Inc.
Fields Point Mfg. Corp.
Jones, John Wiley, Co.
Klenzade Products, Inc.
Mathieson Chemical Corp.
Pioneer Salt Co.
Tesco Chemicals, Inc.

Sodium Silicate

American Oil & Supply Co.
Barada & Page, Inc.
Diamond Alkali Co.

General Chemical Div., Allied Chem-
ical & Dye Corp.
Lyon Chemicals, Inc.
Pioneer Salt Co.

Softener Service, Domestic

American Water Softener Co.
Belco Industrial Equipment Div.
Culligan Zeolite Co.
Layne & Bowler, Inc.
Refinite Corp.

Softeners, Ion-Exchange

Allis-Chalmers Mfg. Co.
American Water Softener Co.
Automatic Pump & Softener Corp.
Belco Industrial Equipment Div.
Bird-Archer Co., Ltd., The
Cochrane Corp.
Culligan Zeolite Co.
Dorr Co., The
General Filter Co.
Graver Water Conditioning Co.
Illinois Water Treatment Co.
Layne & Bowler, Inc.
Maintenance Engineering Corp.
Permutit Co., The
Refinite Corp.
Roberts Filter Mfg. Co.
Worthington Corp.

Softeners, Lime-Soda

Allis-Chalmers Mfg. Co.
American Water Softener Co.
American Well Works, Inc., The
Bird-Archer Co., Ltd., The
Cochrane Corp.
Dorr Co., The
General Filter Co.
Graver Water Conditioning Co.
Illinois Water Treatment Co.
Inflico, Inc.
Maintenance Engineering Corp.
Permutit Co., The
Stuart Corp.
Worthington Corp.

Softening Chemicals

Barada & Page, Inc.
Bird-Archer Co., The
Bird-Archer Co., Ltd., The
Culligan Zeolite Co.
Electric Chemical Co.
General Chemical Div., Allied Chem-
ical & Dye Corp.
Mathieson Chemical Corp.
National Aluminate Corp.
Permutit Co., The
Pittsburgh Plate Glass Co., Columbia-
Southern Chemical Corp.

Solids-Contact Units

American Well Works, Inc., The
Belco Industrial Equipment Div.
Bird-Archer Co., Ltd., The
Dorr Co., The
Graver Water Conditioning Co.
Inflico, Inc.
Maintenance Engineering Corp.
Walker Process Equipment, Inc.
Worthington Corp.

Standpipes; see Tanks

Steel Plate Construction

American Pipe & Construction Co.
Bethlehem Steel Co.
Bryant Water Tank Service Co.
Chicago Bridge & Iron Co.
Consolidated Western Steel Corp.
Dewey Bros., Inc.
Dominion Bridge Co.
Hammond Iron Works
Hydraulic Supply Mfg. Co.
Pittsburgh-Des Moines Steel Co.
Pratt, Henry, Co.
United Concrete Pipe Corp.

(Continued on page 80)

LEADERS IN THE WATER WORKS FIELD SINCE 1896

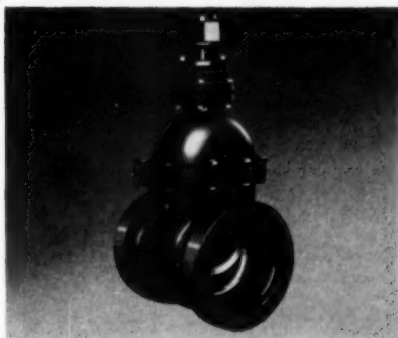


SMITH HYDRANTS

A.W.W.A. Specification and High Pressure; Compression Type; Frost-Proof Tapered Barrel; Positive Action Drain; Low Friction Loss Maximum Delivery.

SMITH VALVES

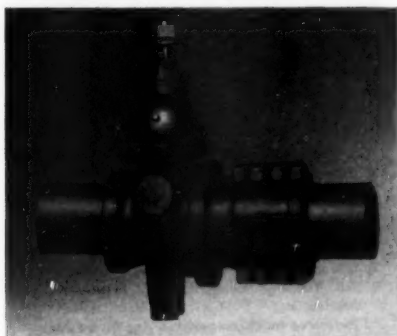
Sizes 2" thru 66" Double Disc, Parallel Seat type for Low, Medium or High Pressure service. Manual, Hydraulic Cylinder or Motor Operated.



INSERTING VALVES

Without interrupting service the Valves are inserted under pressure in Cast Iron and Steel Mains sizes 4" thru 48".

Write for information on other Smith products.



43



THE A.P. SMITH MFG. CO.

EAST ORANGE, NEW JERSEY

(Continued from page 78)

Storage Tanks; see Tanks**Strainers, Suction**American Foundry & Mfg. Co.
Clow, James B., & Sons**Sulfuric Acid**American Cyanamid Co.
American Oil & Supply Co.
Barada & Page, Inc.
Consolidated Chemical Industries, Inc.
General Chemical Div., Allied Chem-
ical & Dye Corp.Lyon Chemicals, Inc.
Mathieson Chemical Corp.
McKesson & Robbins, Inc.
Pioneer Salt Co.
Pittsburgh Coke & Chemical Co.**Surface Wash Equipment**Bird-Archer Co., Ltd., The
Inflico, Inc.
Leopold, F. B., Co., Inc.
Maintenance Engineering Corp.
Permutit Co., The
Stuart Corp.**Swimming Pool Equipment**Alexander Chemical Corp.
American Foundry & Mfg. Co.
American Water Softener Co.
Bacharach, E. W., Inc.
Belco Industrial Equipment Div.
Bird-Archer Co., Ltd., The
Cochrane Corp.
Everson Mfg. Co.
Fischer & Porter Co.
General Filter Co.
Graver Water Conditioning Co.
Hellige, Inc.
Inflico, Inc.
LaMotte Chemical Products Co.Leopold, F. B., Co., Inc.
Maintenance Engineering Corp.
Permutit Co., The
Phipps & Bird, Inc.
Pioneer Salt Co.
Pitt Construction Co.
Proportioners, Inc.
Refinite Corp.
Roberts Filter Mfg. Co.
Steel Protection & Chemical Co.,
Inc.

Wallace & Tiernan Co., Inc.

Tank Painting and RepairBryant Water Tank Service
Central Steel Tank Co.
Consolidated Western Steel Corp.
Craftsmen Painting Service
Federal Pipe & Tank Co.
Flick Painting Co.
G & M Duct Cleaning & Rust Proof-
ing Corp.Hammond Iron Works
O'Connor Rust-Proofing Co., The
Pittman, William G.
Pittsburgh-Des Moines Steel Co.Steel & Tank Service Co.
Universal Construction Co.
Water Tank Service Co.
Watertown Paint & Repair Co.,
Inc.

Whitmire Tank Co., Inc.

Tanks, Prestressed ConcreteG & M Duct Cleaning & Rust
Proofing Corp.
Prelod Co., Inc., The**Tanks, Steel**American Pipe & Construction Co.
Bethlehem Steel Co.
Bryant Water Tank ServiceChicago Bridge & Iron Co.
Cochrane Corp.
Consolidated Western Steel Corp.
Dominion Bridge Co.
Hammond Iron Works
Hydraulic Supply Mfg. Co., Inc.
Inglis, John, Co., Ltd.
Pittsburgh-Des Moines Steel Co.
Pratt, Henry, Co.
United Concrete Pipe Corp.
Water Tank Service Co.
Whitmire Tank Co., Inc.**Tanks, Wood**Federal Pipe & Tank Co.
Water Tank Service Co.**Tapping Machines**Hays Mfg. Co.
Mueller Co.
Red Hed Mfg. Co.
Smith, A. P., Mfg. Co., The
Welsbach Corp., The**Taste and Odor Removal Chem-
icals**American Cyanamid Co.
Barada & Page, Inc.
Culligan Zeolite Co.
Electric Chemical Co.
Inflico, Inc.
Mathieson Chemical Corp.
Pioneer Salt Co.
Salomon, L. A., & Bros.
Tesco Chemicals, Inc.
Welsbach Corp., The Ozone Processes
Div.**Taste and Odor Removal Plants**American Water Softener Co.
American Well Works, Inc., The

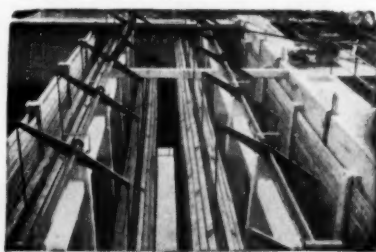
(Continued on page 82)



**6 Reasons why
PALMER SURFACE
WASH SYSTEMS
are specified by
water works engineers**

1. Prevent Sand Beds From Cracking.
2. Eliminate Mud Balls.
3. Save Wash Water.
4. Lengthen Filter Runs.
5. Higher Rates of Filtration.
6. Better Tasting Water.

Write today for Bulletin 451 and a list of water
purification plants that have gone modern.



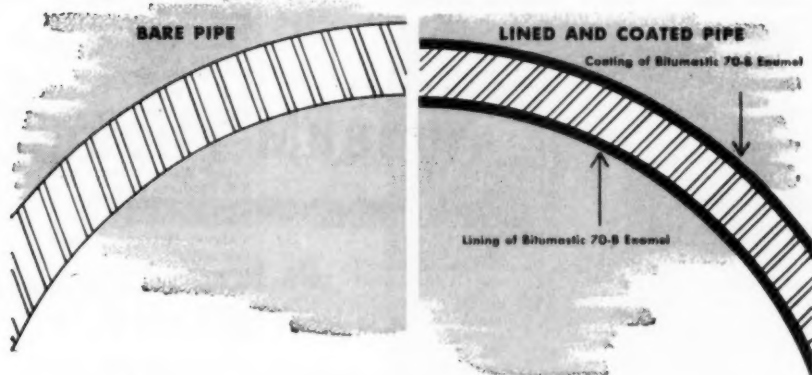
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WALKING BEAM
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is now specified by
water works engineers**

1. Eliminates troublesome underwater bearings.
2. Eliminates expensive dry well construction.
3. All bearings accessible for inspection and lubrication.
4. Produces quick responsive floc formation.
5. Longer filter runs.
6. A saving in alum.

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purification plants that have gone modern.



Yes—you can specify steel pipe with less wall thickness



... when you protect it
with **BITUMASTIC® 70-B ENAMEL**

BITUMASTIC 70-B Enamel—when applied to a thickness of $\frac{3}{32}$ "—protects the exterior of pipe from the corrosive action of the soil in which it is buried. It is much more economical to use this protective coating than to specify pipe with greater wall thickness in order to allow for future corrosion.

For instance, if it were calculated that a $\frac{3}{8}$ " wall would provide sufficient structural strength for a given pipe line, it would be unnecessary to specify a $\frac{3}{8}$ " wall to compensate for corrosion. The use of Bitumastic 70-B Enamel would do away with the need for the additional $\frac{1}{4}$ " of steel—a substantial saving.

Besides specifying less wall thickness, you can use *smaller* pipe by applying

Bitumastic 70-B Enamel. A spun lining of this enamel *keeps* flow capacity high. Flow tests conducted on steel pipe lines, centrifugally lined with hot Bitumastic 70-B Enamel, have shown the value of Hazen-Williams coefficient "C" = 145 to 160. So you don't have to buy *over-sized* pipe to allow for future "shrinkage."

Give your community this two-way savings by specifying durable steel pipe, lined and coated with Bitumastic 70-B Enamel. Write for full information.



KOPPERS COMPANY, INC.

Tar Products Division, Dept. 980-T, Pittsburgh 19, Pennsylvania

(Continued from page 80)

Bacharach, E. W., Inc.
 Belco Industrial Equipment Div.
 Bird-Archer Co., Ltd., The
 Dorr Co., The
 Graver Water Conditioning Co.
 Illinois Water Treatment Co.
 Inflico, Inc.
 Maintenance Engineering Corp.
 Permutit Co., The
 Proportioners, Inc.
 Refinite Corp.
 Roberts Filter Mfg. Co.
 Stuart Corp.
 Walker Process Equipment, Inc.
 Welsbach Corp., The Ozone Processes Div.

Telemetering Equipment

Bristol Co., The
 Builders-Providence, Inc.
 Consolidated Electric Co.
 Fischer & Porter Co.
 General Electric Co.
 Simplex Valve & Meter Co.

Tools and Hardware

Carloss Well Supply Co.
 Pollard, Joseph G., Co., Inc.

Trade Associations

American Concrete Pressure Pipe Assn.
 American Iron & Steel Institute
 Cast Iron Pipe Research Assn.
 Copper & Brass Research Assn.
 Lead Industries Assn.
 Portland Cement Assn.

Treatment Plants

American Water Softener Co.
 American Well Works, Inc., The
 Bacharach, E. W., Inc.
 Belco Industrial Equipment Div.
 Bird-Archer Co., Ltd., The
 Carter, Ralph B., Co.
 Chain Belt Co.
 Cochrane Corp.
 Dorr Co., The
 Filtration Equipment Corp.
 General Filter Co.
 Graver Water Conditioning Co.
 Illinois Water Treatment Co.
 Inflico, Inc.
 Leopold, F. B., Co., Inc.
 Maintenance Engineering Corp.
 Permutit Co., The
 Preload Co., Inc., The
 Proportioners, Inc.
 Refinite Corp.
 Roberts Filter Mfg. Co.
 Stuart Corp.
 Walker Process Equipment, Inc.
 Worthington Corp.

Tubing; see Pipe**Turbidimeters**

Hellige, Inc.

Turbines, Hydraulic

Allis-Chalmers Mfg. Co.
 Pelton Water Wheel Co., The
 Smith, S. Morgan, Co.

Turbines, Steam

Allis-Chalmers Mfg. Co.
 De Laval Steam Turbine Co.
 General Electric Co.
 Ingalls, John, Co., Ltd.
 Westinghouse Electric Corp.
 Worthington Corp.

Unaccounted-for Water; see Leak Detectors; Waste Detection**Valve Boxes; see Curb Boxes; Meter Boxes****Valve Inserting Machines; see Inserting Machines****Valve Operating Units**

Automatic Pump & Softener Corp.
 Bristol Co., The
 Chapman Valve Mfg. Co., The
 Cutler-Hammer, Inc.
 Darling Valve & Mfg. Co.
 Foxboro Co., The
 Inflico, Inc.
 Pratt, Henry, Co.
 R-S Products Corp.
 Rensselaer Valve Co.

Valves, Air Relief

Chapman Valve Mfg. Co., The
 Cochrane Corp.
 Darling Valve & Mfg. Co.
 Federal Pipe & Tank Co.
 Foster Eng. Co.
 Industrial Iron Works
 Jones, James, Co.
 Ludlow Valve Mfg. Co., Inc., The
 Mueller Brass Co.
 Multiplex Mfg. Co.
 Natural Gas Equipment, Inc.
 Pelton Water Wheel Co., The
 R-S Products Corp.
 Rensselaer Valve Co.
 Simplex Valve & Meter Co.
 Terminal City Iron Works, Ltd.

Valves, Altitude

Chapman Valve Mfg. Co., The
 Cla-Val Co.
 Davis Mfg. Co.
 Foster Eng. Co.
 Golden-Anderson Valve Specialty Co.
 Grinnell Co., Inc.
 Pelton Water Wheel Co., The
 R-S Products Corp.
 Ross Valve Mfg. Co.
 Smith, S. Morgan, Co.
 Sparling Meter Co.

Valves, Backflow Prevention

Cla-Val Co.
 Crane Co.
 Fairbanks Co., The
 Foster Eng. Co.
 Golden-Anderson Valve Specialty Co.
 Greenberg's M., Sons
 Hersey Mfg. Co.
 Kelly Pipe Co.
 R-S Products Corp.
 Ross Valve Mfg. Co.
 Simplex Valve & Meter Co.
 Smith, S. Morgan, Co.

Valves, Butterfly

Chapman Valve Mfg. Co., The
 Crane Co.
 Fischer & Porter Co.
 Foxboro Co., The
 Kelly Pipe Co.
 Ludlow Valve Mfg. Co., Inc., The
 Pelton Water Wheel Co., The
 Pratt, Henry, Co.
 R-S Products Corp.
 Smith, S. Morgan, Co.
 Worthington Corp.

Valves, Check

Chapman Valve Mfg. Co., The
 Cla-Val Co.
 Clow, James B., & Sons
 Cochrane Corp.
 Crane Co.
 Darling Valve & Mfg. Co.
 Davis Mfg. Co.
 Fairbanks Co., The
 Foster Eng. Co.
 Golden-Anderson Valve Specialty Co.
 Greenberg's M., Sons
 Grinnell Co., Inc.
 Iowa Valve Co.
 Kelly Pipe Co.
 Kennedy Valve Mfg. Co., The
 Lead Lined Pipe Co.

Ludlow Valve Mfg. Co., Inc., The
 M & H Valve & Fittings Co.
 Mueller Brass Co.
 Mueller Co.
 Pelton Water Wheel Co., The
 Pratt, Henry, Co.
 R-S Products Corp.
 Rensselaer Valve Co.
 Rich Mfg. Co. of California
 Ross Valve Mfg. Co.
 Smith, A. P., Mfg. Co., The
 Smith, S. Morgan, Co.
 Terminal City Iron Works, Ltd.
 Traverse City Iron Works
 Worthington Corp.

Valves, Cone

Chapman Valve Mfg. Co., The
 Clow, James B., & Sons
 Davis Mfg. Co.
 Golden-Anderson Valve Specialty Co.
 Pelton Water Wheel Co., The
 R-S Products Corp.
 Smith, S. Morgan, Co.
 Welsbach Corp., The

Valves, Detector Check

Grinnell Co., Inc.
 Hersey Mfg. Co.

Valves, Electrically Operated

Chapman Valve Mfg. Co., The
 Cla-Val Co.
 Clow, James B., & Sons
 Crane Co.
 Cutler-Hammer, Inc.
 Darling Valve & Mfg. Co.
 Davis Mfg. Co.
 Eddy Valve Co.
 Foxboro Co., The
 Golden-Anderson Valve Specialty Co.
 Hays Mfg. Co.
 Iowa Valve Co.
 Kennedy Valve Mfg. Co., The
 Ludlow Valve Mfg. Co., Inc., The
 M & H Valve & Fittings Co.
 Mueller Co.
 Pelton Water Wheel Co., The
 Permutit Co., The
 Pratt, Henry, Co.
 R-S Products Corp.
 Rensselaer Valve Co.
 Rockwell Mfg. Co.
 Smith, A. P., Mfg. Co., The
 Smith, S. Morgan, Co.
 Stuart Corp.
 Vogt Mfg. Co.
 Walker Process Equipment, Inc.

Valves, Flap

Chapman Valve Mfg. Co., The
 Clow, James B., & Sons
 Greenberg's M., Sons
 Grinnell Co., Inc.
 Iowa Valve Co.
 Ludlow Valve Mfg. Co., Inc., The
 M & H Valve & Fittings Co.
 Mueller Co.
 Traverse City Iron Works
 Vogt Mfg. Co.

Valves, Float

Cla-Val Co.
 Clow, James B., & Sons
 Davis Mfg. Co.
 Foster Eng. Co.
 Golden-Anderson Valve Specialty Co.
 Mueller Brass Co.
 Multiplex Mfg. Co.
 Natural Gas Equipment, Inc.
 Pratt, Henry, Co.
 R-S Products Corp.

Valves, Foot

Baker, R. H., & Co., Inc.
 Chapman Valve Mfg. Co., The
 Clow, James B., & Sons
 Cochrane Corp.

(Continued on page 84)

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Specify Mueller...

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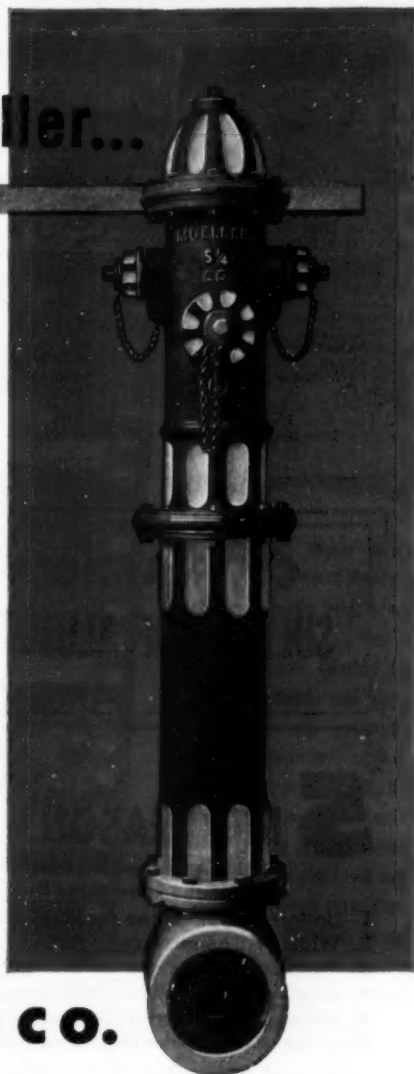
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- SAFETY FLANGE CONSTRUCTION ▶
- SAFETY STEM COUPLING ▶
- DRY TOP DESIGN ▶
- COMPRESSION TYPE MAIN VALVE ▶
- DOUBLE AUTOMATIC DRAIN VALVE ▶
- "O" RING SEALS ▶
- FULLY BRONZE MOUNTED ▶
- BREECH-LOCKED NOZZLES ▶
- DESIGNED FOR ABOVE GROUND ▶
MAINTENANCE

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Write today.

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CHATTANOOGA, TENNESSEE



(Continued from page 82)

Crane Co.
Eddy Valve Co.
Greenberg's, M., Sons
Kelly Pipe Co.
Ludlow Valve Mfg. Co., Inc., The
McDonald, A. Y., Mfg. Co.
Traverse City Iron Works

Valves, Gate

American Foundry & Mfg. Co.
Bourbon Copper & Brass Works Co.
Chapman Valve Mfg. Co., The
Clow, James B., & Sons
Crane Co.
Darling Valve & Mfg. Co.
Davis Mfg. Co.
Eddy Valve Co.
Fairbanks Co., The
Greenberg's, M., Sons
Grinnell Co., Inc.
Iowa Valve Co.
Jones, James, Co.
Kelly Pipe Co.
Kennedy Valve Mfg. Co., The
Lead Lined Pipe Co.
Ludlow Valve Mfg. Co., Inc., The
M & H Valve & Fittings Co.
McDonald, A. Y., Mfg. Co.
Mueller Brass Co.
Mueller Co.
Pacific States Cast Iron Pipe Co.
Pelton Water Wheel Co., The
R-S Products Corp.
Rensselaer Valve Co.
Rich Mfg. Co. of California
Smith, A. P., Mfg. Co., The
Smith-Scott Co.
Stuart Corp.
Terminal City Iron Works, Ltd.
Traverse City Iron Works

Vogt Mfg. Co.
Waterous Co.
Wood, R. D., Co.
Worthington Corp.

Valves, Hose

American Foundry & Mfg. Co.
Chapman Valve Mfg. Co., The
Crane Co.
Darling Valve & Mfg. Co.
Fairbanks Co., The
Greenberg's, M., Sons
Kelly Pipe Co.
Kennedy Valve Mfg. Co., The
Ludlow Valve Mfg. Co., Inc., The
Rensselaer Valve Co.
Ross Valve Mfg. Co.
Terminal City Iron Works, Ltd.
Wood, R. D., Co.

Valves, Hydraulically Operated

Automatic Pump & Softener Corp.
Chapman Valve Mfg. Co., The
Cla-Val Co.
Clow, James B., & Sons
Darling Valve & Mfg. Co.
Davis Mfg. Co.
Fischer & Porter Co.
Golden-Anderson Valve Specialty Co.
Iowa Valve Co.
Kennedy Valve Mfg. Co., The
Ludlow Valve Mfg. Co., Inc., The
M & H Valve & Fittings Co.
Mueller Co.
Pelton Water Wheel Co., The
Pratt, Henry, Co.
R-S Products Corp.
Rensselaer Valve Co.
Rockwell Mfg. Co.
Ross Valve Mfg. Co.

Smith, A. P., Mfg. Co., The
Smith, S. Morgan, Co.
Stuart Corp.
Terminal City Iron Works, Ltd.
Vogt Mfg. Co.

Valves, Plug; see Valves, Cone**Valves, Swing Check**

Chapman Valve Mfg. Co., The
Clow, James B., & Sons
Crane Co.
Darling Valve & Mfg. Co.
Eddy Valve Co.
Fairbanks Co., The
Golden-Anderson Valve Specialty Co.
Greenberg's, M., Sons
Grinnell Co., Inc.
Iowa Valve Co.
Kelly Pipe Co.
Kennedy Valve Mfg. Co., The
Lead Lined Pipe Co.
Ludlow Valve Mfg. Co., Inc., The
M & H Valve & Fittings Co.
Mueller Brass Co.
Mueller Co.
R-S Products Corp.
Rensselaer Valve Co.
Rich Mfg. Co. of California
Smith, A. P., Mfg. Co., The
Stuart Corp.
Terminal City Iron Works, Ltd.
Traverse City Iron Works

Valves, Uniflow Check

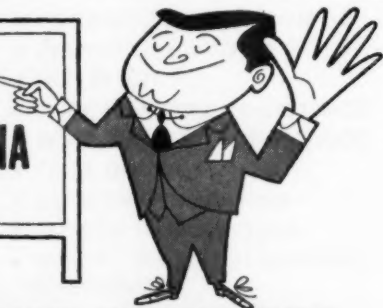
Davis Mfg. Co.
Grinnell Co., Inc.
R-S Products Corp.

Venturi Tubes

Builders-Providence, Inc.
Foxboro Co., The

(Continued on page 86)

CYANAMID'S SULFATE OF ALUMINA



5 BIG REASONS FOR PREFERENCE!

Waterworks superintendents who depend on Cyanamid's Sulfate of Alumina know these five big reasons for its widespread use:

1. Uniform, trouble-free feeding
2. Wide pH range of coagulation
3. Rapid floc formation
4. Maximum adsorption of suspended and colloidal impurities
5. Minimum corrosion of feeding equipment

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In Canada: North American Cyanamid Limited, Toronto and Montreal

BUILDERS

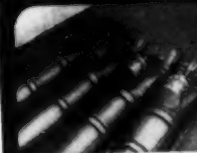
Augusta, Ga.



Ford Motor Company



Albany, N. Y.



West Palm Beach, Fla.



Indianapolis, Ind.

Water Works Controllers

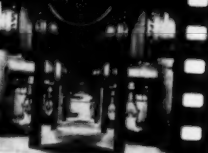
Wichita, Kans.



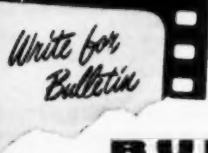
Chicago, Ill.



Toronto, Ont.



Met. District, So. Calif.

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water works
service**Tested**
in
water works
service**Approved**
by leading
water works
engineers

BUILDERS Water Works Controllers are standard throughout the water works field. Extra-heavy, extra-sturdy . . . they're built of materials selected for maximum strength and durability. Designs are extremely simple — adjustments and repairs are easily performed by the average water plant mechanic. You can be sure the controllers specified for your plant will outlast the bonds which cover their cost — specify **BUILDERS** Water Works Controllers! Builders-Providence, Inc., 365 Harris Ave., Providence 1, Rhode Island.

BUILDERS

PIONEERS IN METERS AND CONTROLS



(Continued from page 84)

Inflico, Inc.
Proportioners, Inc.
Simplex Valve & Meter Co.
Terminal City Iron Works, Ltd.

Waste Detection

Fisher Research Laboratory, Inc.
Nutting, H. C., Co., The
Pitometer Co., The

Waterproofing

Barrett Div., The, Allied Chemical & Dye Corp.
Flick Painting Co.

G & M Duct Cleaning & Rust Proofing Corp.

Koppers Co., Inc.
Steel Protection & Chemical Co., Inc.

Weed Killer, Aquatic

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Barada & Page, Inc.
Pioneer Salt Co.

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Baker, G. M., & Son, Inc.
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Carlross Well Supply Co.
Fisher Research Laboratory, Inc.
Keys Well Drilling Co.
Lauman, C. W., & Co., Inc.
Layne & Bowler, Inc.
Layne-Atlantic Co.
McCarthy Well Co.
Miller, J. P., Artesian Well Co.
Ohio Drilling Co.
Pennsylvania Drilling Co.
Rinbrand Well Drilling Co., Inc.
Texas Water Wells, Inc.
Varner Well Drilling Co., Inc.

Well Screens

Carlross Well Supply Co.
Johnson, Edward E., Inc.
Keys Well Drilling Co.

Lauman, C. W., & Co., Inc.
Layne & Bowler, Inc.
Layne-Atlantic Co.
McCarthy Well Co.
Miller, J. P., Artesian Well Co.
Ohio Drilling Co.
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Carlross Well Supply Co.
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Layne & Bowler, Inc.
Layne-Atlantic Co.
McCarthy Well Co.
Ohio Drilling Co.
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LeValley McLeod, Inc.
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Sherman Machine & Iron Works
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Culligan Zeolite Co.
Hawkins Chemical Co.
LeValley McLeod, Inc.
Lyon Chemicals, Inc.
McKesson & Robbins, Inc.
Pioneer Salt Co.
San Antonio Machine & Supply Co.
Tesco Chemicals, Inc.

Control Equipment

Natural Gas Equipment, Inc.
Noland Co., Inc.
San Antonio Machine & Supply Co.
Sherman Machine & Iron Works

Laboratory Supplies

Braun Corp.
Electric Chemical Co.
Hawkins Chemical Co.
San Antonio Machine & Supply Co.

Machinery and Motors

Anderson, Mark J., & Co.
Carlross Well Supply Co.
Fadden Pump Co.
Hardware & Supply Co., The
Hendrie & Bolthoff Co.
Howard Supply Co.
LeValley McLeod, Inc.
Noland Co., Inc.
San Antonio Machine & Supply Co.
Well Machinery & Supply Co., Inc.

Meters and Gages

Clow, James B., & Sons
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Grinnell Co., Inc.
Hardware & Supply Co., The
Haverstick & Co., Inc.
Hendrie & Bolthoff Co.
Howard Supply Co.
LeValley McLeod, Inc.
Noland Co., Inc.
San Antonio Machine & Supply Co.
Sherman Machine & Iron Works
Viking Supply Co.
Water Works Supply Co.
Well Machinery & Supply Co., Inc.

Pipe and Fittings

Albert Pipe Supply Co., Inc.
Carlross Well Supply Co.
Ellis & Ford Mfg. Co.
F & H Supply Co.
Filtration Equipment Corp.
Grinnell Co., Inc.
Hardware & Supply Co., The
Haverstick & Co., Inc.
Hendrie & Bolthoff Co.
Howard Supply Co.
LeValley McLeod, Inc.
Michigan Hydrant & Valve Mfg. Co.
Municipal Supply Co.
Noland Co., Inc.
Pensinger, L. C., & Son
Pump & Lighting Co., Inc.
Republic Supply Co. of California
San Antonio Machine & Supply Co.
Sherman Machine & Iron Works
Valley Cities Supply Co.
Viking Supply Co.
Water Works Supply Co.
Well Machinery & Supply Co., Inc.

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Ellis & Ford Mfg. Co.
Grinnell Co., Inc.
Hardware & Supply Co., The
Haverstick & Co., Inc.
LeValley McLeod, Inc.
Municipal Supply Co.
San Antonio Machine & Supply Co.
Viking Supply Corp.
Water Works Supply Co.
Well Machinery & Supply Co., Inc.

Pumps

Anderson, Mark J., & Co.
Baker, G. M., & Son, Inc.
Carlross Well Supply Co.
Clow, James B., & Sons
Fadden Pump Co.
Hardware & Supply Co., The
Haverstick & Co., Inc.
Hendrie & Bolthoff Co.
Howard Supply Co.
Lauman, C. W., & Co., Inc.
LeValley McLeod, Inc.
Miller, J. P., Artesian Well Co.
Municipal Supply Co.
Pennsylvania Drilling Co.
Pensinger, L. C., & Son
Pump & Lighting Co., Inc.
Rinbrand Well Drilling Co., Inc.
San Antonio Machine & Supply Co.
Sherman Machine & Iron Works

Viking Supply Corp.
Well Machinery & Supply Co., Inc.

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Crane Co.
Ellis & Ford Mfg. Co.
Haverstick & Co., Inc.
Hendrie & Bolthoff Co.
Howard Supply Co.
LeValley McLeod, Inc.
Noland Co., Inc.
Pump & Lighting Co., Inc.
Republic Supply Co. of California
San Antonio Machine & Supply Co.
Valley Cities Supply Co.
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Crane Co.
Ellis & Ford Mfg. Co.
F & H Supply Co.
Hardware & Supply Co., The
Haverstick & Co., Inc.
Hendrie & Bolthoff Co.
Howard Supply Co.
LeValley McLeod, Inc.
Michigan Hydrant & Valve Mfg. Co.
Municipal Supply Co.
Noland Co., Inc.
Pensinger, L. C., & Son
Pump & Lighting Co., Inc.
Republic Supply Co. of California
San Antonio Machine & Supply Co.
Sherman Machine & Iron Works
Valley Cities Supply Co.
Viking Supply Corp.
Water Works Supply Co.
Well Machinery & Supply Co., Inc.

Well Systems and Equipment

Baker, G. M., & Son, Inc.
Carlross Well Supply Co.
Clow, James B., & Sons
Crane Co.
Hardware & Supply Co., The
Hendrie & Bolthoff Co.
Lauman, C. W., & Co., Inc.
LeValley McLeod, Inc.
McCarthy Well Co.
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Pennsylvania Drilling Co.
Pump & Lighting Co., Inc.
Rinbrand Well Drilling Co., Inc.
San Antonio Machine & Supply Co.
Varner Well Drilling Co., Inc.
Well Machinery & Supply Co., Inc.

(Continued on page 88)



TIME-SAVING ECONOMIES

When a meter-servicing chore seems to require more time and bother than it is worth, Ford engineers usually come up with a new idea to save time and cut costs. Each of the products in this space was pioneered by Ford to solve an expensive service problem. It pays to refer your problems to Ford FIRST.



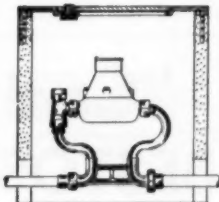
RESETTERS

Until the Ford Resetter was developed the only way to raise a too-low meter was to dig up and remake the setting. The modern way to do the job is to remove the meter from between the old couplings, insert the Resetter and connect the meter between the flanged copper tubes.



RINGSTYLE COUPLINGS

The Ringstyle idea of putting the meter nut on the coupling body from the flange end permits designing meter couplings for attaching direct to iron pipe or copper tubing. There are savings in fittings, joints, labor and space.



COPPERSETTERS

The Coppersetter is a complete meter mounting and has been widely adopted for outside meter settings in shallow and medium depth service lines. The word

is copyrighted; there is no Coppersetter except that made by Ford.

TESTERATE INDICATOR

It is important to know the rate of flow at which a meter is tested. The Testerate Indicator shows the rate instantly, clearly and accurately. Introduced in 1938, there are almost two thousand in service.



THE FORD METER BOX COMPANY, INC.

FOR BETTER WATER SERVICES

Wabash, Indiana

FORD

(Continued from page 86)

ASSOCIATE MEMBERS

- Alabama Pipe Co.**, Box 791, Anniston, Ala.
Albert Pipe Supply Co., Inc., Berry & N. 13th Sts., Brooklyn 11, N.Y.
Alexander Chemical Corp., 35 E. Wacker Dr., Chicago 1, Ill.
Alhydro, Inc., 316 Wyndhurst Ave., Baltimore 10, Md.
Allied Chemical & Dye Corp., see Barrett Div.; General Chemical Div.
Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.
Aluminum Co. of America, New Kensington, Pa.
Alward, H. W., Inc., 161 Mt. Airy Rd., Bernardsville, N.J.
Ambursen Eng. Corp., 295 Madison Ave., New York 17, N.Y.
American Brass Co., 414 Meadow St., Waterbury 88, Conn.
American Cast Iron Pipe Co., Box 2603, Birmingham 2, Ala.
American City Magazine, The, 470—4th Ave., New York 16, N.Y.
American Concrete Pressure Pipe Assn., 228 N. La Salle St., Chicago, Ill.
American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N.Y.
American Foundry & Mfg. Co., 1015 Hebert St., St. Louis 7, Mo.
American Iron & Steel Institute, 350—5th Ave., New York 1, N.Y.
American Lumber & Treating Co., 1118 Wilshire Blvd., Los Angeles 17, Calif.
American Oil & Supply Co., 238 Wilson Ave., Newark 5, N.J.
American Pipe & Construction Co., Box 3428 Terminal Annex, Los Angeles 54, Calif.
American Water Softener Co., Lehigh Ave. & 4th St., Philadelphia 33, Pa.
American Well Works, Inc., The, Aurora, Ill.
Anderson, Mark J., & Co., Box 803, Tampa 1, Fla.
Armco Drainage & Metal Products, Inc., Middletown, Ohio
Arrowhead Lime & Chemical Co., 175 S. Alfarado St., Los Angeles 4, Calif.
Art Concrete Works, 366 S. Fair Oaks, Pasadena 1, Calif.
Atlas Foundry & Machine Co., 3012 S. Wilkeson St., Tacoma 1, Wash.
Atlas Mineral Products Co. of Pennsylvania, Mertztown, Pa.
Aurora Pump Co., 629 Locust St., Aurora, Ill.
Automatic Control Co., 1005 University Ave., St. Paul 4, Minn.
Automatic Pump & Softener Corp., 2412 Grant Ave., Rockford, Ill.
B. C. Concrete Co., Ltd., 1025 W. 77th Ave., Vancouver, B.C.
Babcock & Wilcox Co., The, Alliance, Ohio
Bacharach, E. W., Inc., 800 Rialto Bldg., Kansas City 6, Mo.
Backflow Eng. & Equipment Co., 5725 Alcoa Ave., Los Angeles 58, Calif.
Badger Meter Mfg. Co., 2357 N. 30th St., Milwaukee 45, Wis.
Baker, G. M., & Sons, Inc., 149 Hosack St., Columbus 7, Ohio
Baker, R. H., Co., Inc., 2070 E. Slauson Ave., Huntington Park, Calif.
Barada & Page, Inc., Guinotte & Michigan Aves., Kansas City 1, Mo.
Barrett Div., The, Allied Chemical & Dye Corp., 40 Rector St., New York 6, N.Y.
Basalt Rock Co., Inc., 8th & River St., Napa, Calif.
Belco Industrial Equipment Div., 52 Iowa Ave., Paterson, N.J.
Belle Alkali Co., Belle, W.Va.
Belmont Smelting & Refining Works, Inc., 330 Belmont Ave., Brooklyn 7, N.Y.

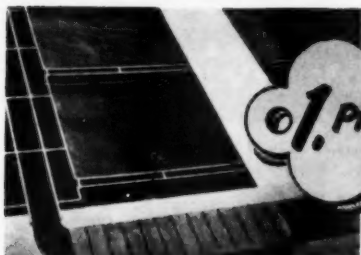
(Continued on page 90)

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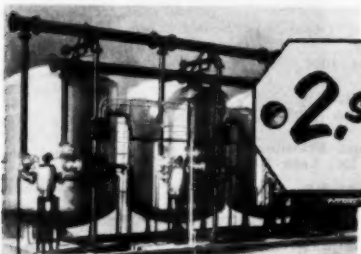
4 KEYS TO BETTER WATER



1. PRECIPITATORS

PROBLEM: Turbidity, Color, Hardness, Iron, Alkalinity

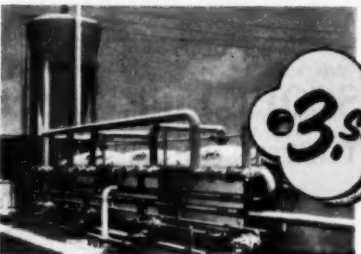
PRECIPITATORS remove dirt, color, hardness, iron, alkalinity, silica, fluorides, taste, odor by coagulation, precipitation, and settling. Sludge-blanket saves space, chemicals, time! Horizontal or vertical designs of any capacity. Units to triple capacities of settling basins.



2. SOFTENERS

PROBLEM: Hardness with some Iron, Manganese

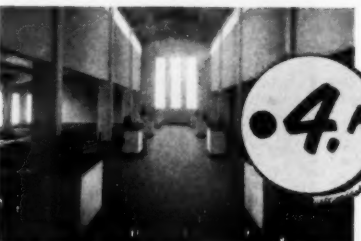
SOFTENERS quickly reduce hardness to zero, while removing troublesome iron, manganese. Positive results—no waste disposal problem. Easy to operate, low installation cost. Pressure or gravity units — any capacity. Permutit automatic controls save operator's time, increase efficiency of old plants.



3. SPIRATORS

PROBLEM: Hard, Clear Water

SPIRATORS soften on new principle — *catalytic precipitation*. Hard water and lime-soda swirl upward through catalyst granules. Precipitates fall to bottom as easily disposable, damp granules. Effluent is soft, clear, ready for filtration. Total reaction time is 8 minutes.



4. FILTERS

PROBLEM: Traces of Dirt, Oil, Iron

FILTERS trap the last traces of suspended impurities, deliver a crystal-clear effluent. Permutit rapid sand filters and gravity types feature automatic controls. Wash, rewash and return to service — with no operator present!

FREE WATER ANALYSIS! Write today for free bulletins on any water conditioning problem. Permutit will analyze your water supply, make recommendations without obligation. THE PERMUTIT COMPANY, Dept. JAD, 330 W. 42nd St., New York 36, N. Y.

PERMUTIT®

WATER CONDITIONING HEADQUARTERS FOR OVER 40 YEARS

(Continued from page 88)

Bethlehem Steel Co., Bethlehem, Pa.**Bingham & Taylor Corp.**, Nalle St., Culpeper, Va.**Bird-Archer Co.**, 4337 North American St., Philadelphia 40, Pa.**Bird-Archer Co., Ltd.**, Cobourg, Ont.**Bourbon Copper & Brass Works Co.**, 618 E. Front St., Cincinnati, Ohio**Braun Corp.**, 2260 E. 15th St., Los Angeles 21, Calif.**Bridgeport Brass Co.**, 30 Grand St., Bridgeport 2, Conn.**Briggs, W. A., Bitumen Co.**, 3303 Richmond St., Philadelphia 34, Pa.**Bristol Co., The**, Waterbury 91, Conn.**Bryant Water Tank Service**, Box 3205, Tampa, Fla.**Buffalo Meter Co.**, 2917 Main St., Buffalo 14, N.Y.**Buffalo Pipe & Foundry Corp.**, Box 55, Station B, Buffalo 7, N.Y.**Builders-Providence, Inc.**, 345 Harris Ave., Providence 1, R.I.**Burroughs Adding Machine Co.**, 6071—2nd Blvd., Detroit 32, Mich.**Burt & Binford**, 507 W. 2nd St., Hutchinson, Kan.**Byers, A. M., Co.**, 1612 Clark Bldg., Pittsburgh 22, Pa.**Calgon, Inc.**, Box 1346, Pittsburgh 30, Pa.**Calumet & Hecla Consolidated Copper Co.**; see Wolverine Tube Div.**Carborundum Co., The**, Perth Amboy, N.J.**Cardox Corp.**, 307 N. Michigan Ave., Chicago 1, Ill.**Carlson Well Supply Co.**, 111 Concord Ave., Memphis, Tenn.**Carson, H. Y., Co.**, Box 67, Tarrant Branch, Birmingham 7, Ala.**Carter, Ralph B., Co.**, 192 Atlantic St., Hackensack, N.J.**Cast Iron Pipe Research Assn.**, 122 S. Michigan Ave., Chicago 3, Ill.**Catholic Rustproofing Co.**, Box 116, Carrizso Springs, Tex.**Central Foundry Co.**, Murray & Pacific Sts., Newark 5, N.J.**Central Steel Tank Co.**, Box 1742, Wichita, Kan.**Centriline Corp.**, 140 Cedar St., New York 6, N.Y.**Chain Belt Co.**, Box 2022, Milwaukee 1, Wis.**Chapman Valve Mfg. Co.**, 203 Hampshire St., Indian Orchard, Mass.**Chemical Fire & Rust Proofing Corp.**, 11-33—31st Dr., Long Island City 6, N.Y.**Chicago Bridge & Iron Co.**, 1305 W. 105th St., Chicago 43, Ill.**Chicago Pump Co.**, 622 W. Di-versey Pkwy., Chicago 14, Ill.**Clark, H. W., Co.**, Box 563, Mattoon, Ill.**Cla-Val Co.**, 1600 Orange St., Alhambra, Calif.**Clow, James B., & Sons**, 201 N. Talman Ave., Chicago 80, Ill.**Coastal Chemical Co.**, E. Broad & Liberty St., Savannah, Ga.**Cochrane Corp.**, 17th St. at Allegheny Ave., Philadelphia 32, Pa.**Columbia-Southern Chemical Corp.**; see Pittsburgh Plate Glass Co.**Concrete Conduit Co.**, Box 2670, Phoenix, Ariz.**Concrete Products & Roofing Co.**, 4523—1st Ave., N., Birmingham 6, Ala.**Consolidated Chemical Industries, Inc.**, 640 Mellie Esperson Bldg., Houston 2, Tex.**Consolidated Electric Co.**, 469 Broadway St., St. Paul 1, Minn.**Consolidated Western Steel Corp.**, Div. U.S. Steel Co., 141 Battery St., San Francisco 6, Calif.**Copper & Brass Research Assn.**, 420 Lexington Ave., New York 17, N.Y.**Craftsmen Painting Service**, 7654 S. Park Ave., Chicago 19, Ill.**Crane Co.**, 836 S. Michigan Ave., Chicago 5, Ill.**Culligan Zeolite Co.**, Northbrook, Ill.**Cutler-Hammer, Inc.**, 12th St. & St. Paul Ave., Milwaukee 1, Wis.

(Continued on page 92)



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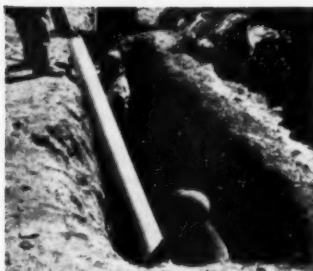
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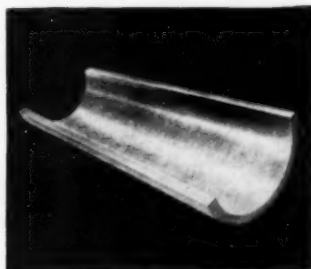


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Water lines are quickly assembled and pipe crews lay more pipe per day . . . when Transite® Pressure Pipe is used for your water lines. That's because Transite is light in weight, easy to handle . . . because joints are easily made and readily checked during assembly . . . and because most pipe sizes can be unloaded from trucks and lowered into the trench without use of mechanical handling equipment.

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(Continued from page 90)

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Davis Mfg. Co., 321 N. Maple Dr., Beverly Hills, Calif.

Dayton Foundry, 11803 Industrial Ave., Hollydale, Calif.

Dean, Payne & Co., Clinton, Conn.

De Laval Steam Turbine Co., Trenton 2, N.J.

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Diamond Alkali Co., 300 Union Commerce Bldg., Cleveland 14, Ohio

Diehl Pump & Supply Co., Inc., 800 Fehr Ave., Louisville 4, Ky.

Dixon, Joseph, Crucible Co., 167 Wayne St., Jersey City 3, N.J.

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Dorr Co., The, Barry Place, Stamford, Conn.

Dow Chemical Co.: see Great Western Div.

Dresser Mfg. Div., Dresser Industries, Inc., 41 Fisher Ave., Bradford, Pa.

Eddy Valve Co., Waterford, N.Y.

Electric Chemical Co., 2317 Rosewood Ave., Toledo, Ohio

Electro Rust-Proofing Corp. (N.J.), 1 Main St., Belleville, N.J.

Ellis & Ford Mfg. Co., 2423 Goodrich Ave., Ferndale 20, Mich.

Engineering News-Record, 330 W. 42nd St., New York 18, N.Y.

Ern Construction Co., Inc., Route 29, Springfield, N.J.

Everson Mfg. Co., 214 W. Huron St., Chicago 10, Ill.

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Fadden Pump Co., 740 Washington Ave., N., Minneapolis 1, Minn.

Fairbanks Co., The, 393-399 Lafayette St., New York 3, N.Y.

Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill.

Farnan Brass Works Co., The, Box 6147, Cleveland 1, Ohio

Federal Pipe & Tank Co., 6851 E. Marginal Way, Seattle 8, Wash.

Fields Point Mfg. Corp., Box 95, Edgewood Sta., Providence 5, R.I.

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Flexible Underground Pipe Cleaning Co., 9095 Venice Blvd., Los Angeles 34, Calif.

Flick Painting Co., Garrison, Iowa

Flux Co., Inc., The, 1409 Willow St., Minneapolis 4, Minn.

Food Machinery & Chemical Corp.: see Peerless Pump Div.

Ford Meter Box Co., Inc., The, Wabash, Ind.

Fornl, George P., 1379-62nd St., Emeryville 8, Calif.

Foster Engineering Co., 835 Lehigh Ave., Union, N.J.

Foxboro Co., Neponset Ave., Foxboro, Mass.

Franklin Contracting Co., Globe Rd., Great Notch, N.J.

Fraser Cement Products Co., 3020 Andrita St., Los Angeles 65, Calif.

G & M Duct Cleaning & Rust Proofing Corp., Rm. 905, 103 E. 125th St., New York 35, N.Y.

General Chemical Div., Allied Chemical & Dye Corp., Edgewater, N.J.

General Electric Co., 1 River Rd., Schenectady, N.Y.

General Filter Co., 923-2nd St., Ames, Iowa

General Paint Corp.: see Hill, Hubbell & Co. Div.

General Reduction Co., 1820 Roscoe St., Chicago 13, Ill.

Gifford-Hill-American, Inc., Box 4335, Station A, Dallas, Tex.

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

Goldak Co., The, 1544 W. Glenoaks Blvd., Glendale 1, Calif.

Golden-Anderson Valve Specialty Co., 207 Keenan Bldg., Pittsburgh 22, Pa.

Graver Water Conditioning Co., Div., Graver Tank & Mfg. Co., Inc., 216 W. 14th St., New York 11, N.Y.

Great Western Div., Dow Chemical Co., 310 Sansome St., San Francisco, Calif.

Greenberg's, M., Sons, 765 Folsom St., San Francisco 7, Calif.

Gregg Co., Inc., The, 1418 Walnut St., Philadelphia 2, Pa.

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Hawkins Chemical Co., 3100 E. Hennepin Ave., Minneapolis 13, Minn.

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Homelite Corp., Riverdale Ave., Port Chester, N.Y.

Hooker Electrochemical Co., Niagara Falls, N.Y.

Howard Supply Co., 5125 Santa Fe Ave., Los Angeles 58, Calif.

Hydraulic Development Corp., 50 Church St., New York 7, N.Y.

Hydraulic Supply Mfg. Co., 7500-8th Ave., Seattle 8, Wash.

Illinois Water Treatment Co., 840 Cedar St., Rockford, Ill.

Industrial Chemical Sales Div., West Virginia Pulp & Paper Co., 230 Park Ave., New York 17, N.Y.

Industrial Iron Works, Box 4625, Portland 2, Ore.

Inertol Co., Inc., 480 Frelinghuyzen Ave., Newark 5, N.J.

Infilco, Inc., Box 5033, Tucson, Ariz.

Inglis, John, Co., Ltd., 14 Strachan Ave., Toronto, Ont.

International Salt Co., 48 Walnut Ave., Millburn, N.J.

Iowa Valve Co., 210 N. Talman Ave., Chicago, Ill.

Jaeeger Machine Co., The, 550 W. Spring St., Columbus 16, Ohio

Jeffrey Mfg. Co., The, 1st Ave. & 4th St., Columbus, Ohio

Johns-Manville Sales Corp., 22 E. 40th St., New York 16, N.Y.

Johnson, Edward E., Inc., 2304 Long Ave., St. Paul 4, Minn.

Johnston Pump Co., 3272 E. Foothill Blvd., Pasadena 8, Calif.

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Jones, James, Co., Inc., 321 N. Temple City Blvd., El Monte, Calif.

Keasbey & Mattison Co., Ambler, Pa.

Kelly Pipe Co., 525 N. Mission Rd., Los Angeles 54, Calif.

Kennedy Valve Mfg. Co., The, 1021 E. Water St., Elmira, N.Y.

Keys Well Drilling Co., 413 N. Lexington Ave., St. Paul 4, Minn.

Kienzade Products, Inc., Beloit, Wis.

Klett Mfg. Co., 179 E. 87th St., New York 28, N.Y.

Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.

Kukurin, Frank, & Sons, Inc., 616 Greensburg Ave., East McKeesport, Pa.

LaMotte Chemical Products Co., Towson, Baltimore 4, Md.

Lauman, C. W., & Co., Inc., Route 107, Hicksville, N.Y.

Layne & Bowler, Inc., Box 6697, Hollywood Station, Memphis 8, Tenn.

Layne-Atlantic Co., Box 1568, Norfolk 1, Va.

Lead Industries Assn., 420 Lexington Ave., New York 17, N.Y.

Lead Lined Pipe Co., Box 150, Wakefield, Mass.

Lendite Co., Inc., The, Girard Trust Co. Bldg., Philadelphia 2, Pa.

Leopold, F. B., Co., Inc., 2413 W. Carson St., Pittsburgh 4, Pa.

(Continued on page 94)

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Cleveland 20, Ohio

AQUA NUCHAR ACTIVATED CARBON

Aqua Nuchar is a quality of activated carbon specifically produced for water purification. Its characteristic is a high adsorptive power for those foreign molecules in water which give rise to objectionable odors. Aqua Nuchar offers the quickest, lowest-cost way to eliminate odors and prevent their recurrence. It is estimated that the year 'round use of Aqua Nuchar Activated Carbon costs on an average less than two cents per capita per year.

With the increase in use of activated carbon in water treatment, competitive carbons and competitive treatments entered the field. Thus it became necessary to develop tests and suitable specifications whereby municipalities would be able to select the activated carbon most suitable for their individual needs.

Development of the Threshold Odor Test supplied the means of measuring odor intensities in water and by means of this test it is possible to determine that quality of carbon which will be most effective for removing odors from the individual supply. Municipal officials are invited to write us for full information regarding this test.

Members of our Research Staff have carried on evaluation tests, comparing Aqua Nuchar with competitive materials for ability to remove odors.

Odors in water are frequently erroneously characterized as tastes. Psychologists recognize four taste sensations; salt, sweet, sour and bitter. Perhaps the greatest cause of odor in water supplies is due to Algae. Odor is occasionally caused by trade wastes, resulting in very severe odor epidemics. Aqua Nuchar removes these odorous compounds in water, thus enabling delivery of a palatable water to the consumer at all times.

Even where there has been no consumer complaint, many plants apply small dosages of Aqua Nuchar in order to prevent a sudden taste or odor condition from

getting out of hand. Thus, when tastes and odors develop in a raw water supply, it is only necessary to apply somewhat increased dosages of Aqua Nuchar to control the condition.

AQUA NUCHAR HAS THESE SPECIAL QUALITIES: It disperses more quickly throughout the entire body of water and remains in suspension a longer period of time. Thus the carbon particles have a greater opportunity to contact taste and odor bodies in the water in order to accomplish their **REMOVAL BY ADSORPTION**.

It is common practice in the design of new plants to provide for activated carbon treatment of the water. Application of Aqua Nuchar Activated Carbon is advisable not only in all water supplies where tastes and odors may be present, but also in water where tastes and odors become apparent after chlorination, but also in water where tastes and odors may become apparent after chlorination. It is a wise precaution under all circumstances.

During floods and high water, odorous compounds may be flushed down to your water intake. Therefore at such times Threshold Odor Tests should be run regularly and you should be prepared with an adequate supply of Aqua Nuchar.

The manufacturers of Aqua Nuchar Activated Carbon offer the services of Technical Field Men to study your methods and recommend the proper place to add activated carbon. They have studied the taste and odor problems of hundreds of plants with surface water supplies and can quickly find the point at which activated carbon should be added to give optimum results.

Warehouse and factory stocks are maintained at strategic points throughout the country so that rush deliveries can usually be made within twenty-four hours or less by local express.

ACTIVATED



CARBON

Ligno Crude Tall Oil • Indusoil Distilled Tall Oil
Tallene Tall Oil Pitch • Tallex Abietic Acid • Indulin (Lignin)

(Continued from page 92)

Levalley, McLeod, Inc., 215 E. Church St., Elmira, N.Y.**Limestone Products Corp. of America**, 122 Main St., Newton, N.J.**Lindsay, P. K. Co.**, 97 Tilestone St., Everett 49, Mass.**Link-Belt Co.**, Colmar, Pa.**Lock Joint Pipe Co.**, Box 269, East Orange, N.J.**Lone Star Steel Co.**, Box 8087, Dallas, Tex.**Lovell Chemical Co.**, Watertown 72, Mass.**Ludlow Valve Mfg. Co.**, Troy, N.Y.**Lynchburg Foundry Co.**, Lynchburg, Va.**Lyon Chemicals, Inc.**, 2305 Hampden Ave., St. Paul 4, Minn.**M&H Valve & Fittings Co.**, Anniston, Ala.**Mabbs Hydraulic Packing Co.**, 431 S. Dearborn St., Chicago 5, Ill.**Maintenance Eng. Corp.**, 3711 Clinton Drive, Houston, Tex.**Mathieson Chemical Corp.**, Mathieson Bldg., Baltimore 3, Md.**McCarthy Well Co.**, 670 Eustis St., St. Paul 4, Minn.**McCrex Corrosion Eng. Co.**, 506 N. Cedar St., Tipton, Iowa**McDonald, A. Y., Mfg. Co.**, 12th & Pine Sts., Dubuque, Iowa**McKesson & Robbins, Inc.**, Burlington, Iowa**McWane Cast Iron Pipe Co.**, Box 2601, Birmingham 2, Ala.**Menke Stone & Lime Co.**, 828 Vermont St., Quincy, Ill.**Metallizing Eng. Co., Inc.**, 38-14 —30th St., Long Island City 1, N.Y.**Michigan Hydrant & Valve Mfg. Co.**, 8747 Brandt Ave., Dearborn, Mich.**Miller, J. P., Artesian Well Co.**, 8226 Ogden Ave., Brookfield, Ill.**Milwaukee Lead Works**, 3139 N. 31st St., Milwaukee 16, Wis.**Mississippi Lime Co.**, Alton, Ill.**Morse Boulder Destructor Co.**, 205 E. 42nd St., New York 17, N.Y.**Morse Bros. Machinery Co.**, 2900 Brighton Blvd., Denver 1, Colo.**Motorola, Inc.**, 4545 Augusta Blvd., Chicago 51, Ill.**Mueller Brass Co.**, Port Huron, Mich.**Mueller Co.**, Decatur 70, Ill.**Multiplex Mfg. Co.**, 600 Fowler Ave., Berwick, Pa.**Municipal Supply Co.**, Box 1771, Houston, Tex.**Municipal Utilities**, 341 Church St., Toronto 2, Ont.**National Aluminate Corp.**, Chicago 38, Ill.**National Tube Div.**, U.S. Steel Co., 525 William Penn Pl., Pittsburgh 30, Pa.**National Water Main Cleaning Co.**, Rm. 1279, 50 Church St., New York 7, N.Y.**Natural Gas Equipment, Inc.**, 190 E. Glenarm St., Pasadena 2, Calif.**Neptune Meter Co.**, 50 W. 50th St., New York 20, N.Y.**Neumann Co.**, 946 W. 69th St., Chicago 21, Ill.**Niagara Alkali Co.**, 60 E. 42nd St., New York 17, N.Y.**Noland Co., Inc.**, 512 Spring St., N.W., Atlanta, Ga.**Northrop & Co., Inc.**, Spring Valley, N.Y.**Notting, H. C. Co., The**, 4120 Airport Rd., Cincinnati 26, Ohio**O'Connor Rust-Proofing Co.**, 344 Carson St., Torrance, Calif.**Ohio Drilling Co.**, 113—3rd St., N.W., Massillon, Ohio**Ohio Salt Co., The**, 580 E. Town St., Columbus 15, Ohio**Omega Machine Co.**, 345 Harris Ave., Providence 1, R.I.**Owens-Corning Fiberglas Corp.**, Toledo 1, Ohio**Pacific States Cast Iron Pipe Co.**, Box 18, Provo, Utah**Panhandle Construction Co.**, Box 1500, Lubbock, Tex.**Parsons Co., The**, 200 N. 8th Ave., E., Newton, Iowa**Peerless Pump Div.**, Food Machinery & Chemical Corp., 301 W. Ave. 26, Los Angeles 31, Calif.**Pelton Water Wheel Co., The**, 2929—19th St., San Francisco 10, Calif.

(Continued on page 96)

WHY USE JOHNSON WELL SCREENS?

1. Less drawdown.
2. Greater specific capacity.
3. Lowest pumping cost per million gallons of water.

True economy is measured not by first cost alone, but in lowest yearly cost. The JOHNSON WELL SCREEN combines an unmatched record of experience and dependability with greatest strength and durability. It is the finest and most truly economical well screen in the world.

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~ well screen specialists since 1904 ~

St. Paul 14, Minn.



96%

ARE STILL IN SERVICE

We are stating a fact and you don't have to take our word for it. We refer you to one of the most important fact-finding jobs ever undertaken by the water works industry—a survey of the service life of water works facilities. This survey was sponsored by three water works associations.

The survey shows that 96% of all the cast iron water mains ever laid by 25 representative cities in sizes 6-inch and larger *are still in service.*

A detailed report of the survey has been published by the American Water Works Association. We have reprinted, by permission, the facts pertaining to cast iron water mains in a brochure which will be sent on request. Write to Cast Iron Pipe Research Association, Thomas F. Wolfe, Managing Director, 122 South Michigan Ave., Chicago 3, Ill.

CAST  IRON

®

CAST IRON PIPE **SERVES FOR CENTURIES**

(Continued from page 94)

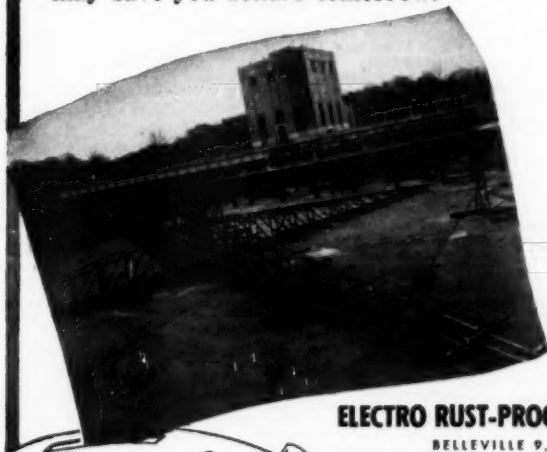
- Fennington-Winter Water Systems, Inc.**, 2911 Liberty Bank Bldg., Oklahoma City, Okla.
- Pennsylvania Drilling Co.**, 1201-15 Chartiers Ave., Pittsburgh 20, Pa.
- Pensinger, L. C. & Son**, 1609 Oak St., Kansas City 6, Mo.
- Permutit Co., The**, 330 W. 42nd St., New York 36, N.Y.
- Phipps & Bird, Inc.**, 303 S. 6th St., Richmond 5, Va.
- Pioneer Salt Co.**, 940 N. Delaware Ave., Philadelphia 23, Pa.
- Pipe Linings, Inc.**, 4675 Firestone Blvd., South Gate, Calif.
- Pittometer Co., The**, 50 Church St., New York 7, N.Y.
- Pitt Construction Co., The**, 1235 Washington Blvd., Pittsburgh 6, Pa.
- Pittman, William G., Co., Inc.**, 61 Voorhis Lane, Hackensack, N.J.
- Pittsburgh Coke & Chemical Co.**, 1905 Grant Bldg., Pittsburgh 19, Pa.
- Pittsburgh-Des Moines Steel Co.**, Neville Island, Pittsburgh 25, Pa.
- Pittsburgh Equitable Meter Div.**, Rockwell Mfg. Co., 4207-1st Ave., Brooklyn 32, N.Y.
- Pittsburgh Pipe Cleaner Co.**, Box 173, Morristown, N.J.
- Pittsburgh Plate Glass Co.**, Columbia-Southern Chemical Corp., Barberton, Ohio
- Plumb, D. S., Co., Inc.**, 73-77 Norfolk St., Newark 4, N.J.
- Pollard, Joseph G., Co., Inc.**, New Hyde Park, N.Y.
- Pomona Terra-Cotta Co.**, Pomona, N.C.
- Portland Cement Assn.**, 33 W. Grand Ave., Chicago 10, Ill.
- Praitt, Henry Co.**, 2222 Halstead St., Chicago 8, Ill.
- Preload Co., Inc.**, The, 211 E. 37th St., New York 16, N.Y.
- Price Bros. Co.**, 1932 Monument Ave., Dayton, Ohio
- Proportioners, Inc.**, 345 Harris Ave., Providence 1, R.I.
- Public Works Magazine**, 310 E. 45th St., New York 17, N.Y.
- Pump & Lighting Co., Inc.**, 300 E. 9th St., Charlotte 1, N.C.
- Pure Carbonic, Inc.**, 60 E. 42nd St., New York 17, N.Y.
- R-S Products Corp.**, 4530 Germantown Ave., Philadelphia 44, Pa.
- Rea, W. L., Construction Co.**, 401 Westchester Dr., Corpus Christi, Tex.
- Red Hed Mfg. Co.**, 368 Congress St., Boston 10, Mass.
- Refinite Corp.**, Box 1312, Omaha, Neb.
- Reilly Tar & Chemical Corp.**, 1615 Merchants Bank Bldg., Indianapolis 4, Ind.
- Reliable Iron Foundry, Inc.**, 1583 Fishburn St., Los Angeles 3, Calif.
- Remington Band Inc.**, 315-4th Ave., New York 10, N.Y.
- Rensselaer Valve Co.**, Troy, N.Y.
- Republic Steel Corp.**, 1470 Republic Bldg., Cleveland 1, Ohio
- Republie Supply Co. of California**, 2600 S. Eastland Ave., Los Angeles 54, Calif.
- Revere Copper & Brass, Inc.**, 230 Park Ave., New York 17, N.Y.
- Rich Mfg. Co. of California**, 3851 Santa Fe Ave., Los Angeles 58, Calif.
- Rinbrand Well Drilling Co., Inc.**, 14 Waldron Ave., Glen Rock, N.J.
- Roberts Filter Mfg. Co.**, Darby, Pa.
- Rockwell Mfg. Co.**, 400 N. Lexington Ave., Pittsburgh 8, Pa.
- Ross Valve Mfg. Co., Inc.**, Oakwood Ave., Troy, N.Y.
- Salomon, L. A. & Bros.**, 216 Pearl St., New York 38, N.Y.
- San Antonio Machine & Supply Co.**, Box 660, San Antonio, Tex.
- Sherman Machine & Iron Works**, 2-26 E. Main St., Oklahoma City, Okla.
- Simmer, W. R., Co.**, 3709 W. Armitage St., Chicago 47, Ill.
- Simplex Valve & Meter Co.**, 6759 Upland St., Philadelphia 42, Pa.
- Skinner, M. B., Co.**, South Bend, Ind.
- Smith, A. P., Mfg. Co., The**, 545 N. Arlington Ave., East Orange, N.J.
- Smith, S. Morgan, Co., York, Pa.**
- Smith-Blair, Inc.**, Box 666, South San Francisco, Calif.
- Smith-Scott Co.**, 6565 Mission Blvd., Riverside, Calif.
- Sockwell Co.**, 156 Rogers St., N.E., Atlanta 6, Ga.
- Southern Pipe & Casing Co.**, Box C, Azusa, Calif.
- Sparling Meter Co.**, 945-51 N. Main St., Los Angeles 54, Calif.
- Standard Elec. Time Co., The**, 91 Logan St., Springfield, Mass.
- Stauffer Mfg. Co.**, 2453 Merced Ave., El Monte, Calif.
- Steel Protection & Chemical Co., Inc.**, Mooresville, Ind.
- Steel & Tank Service Co.**, 118 W. 24th St., Charlotte, N.C.
- Stuart Corp.**, 516 N. Charles St., Baltimore 1, Md.
- Swatek, M. A. & Co.**, 519 Hightower Bldg., Oklahoma City 2, Okla.
- Tate Pipe Linings, Inc.**, 47 Haverhill St., Andover, Mass.
- Taylor Forge & Pipe Works**, 50 Church St., New York 7, N.Y.
- Taylor Foundry Co.**, Box 213, Wichita Falls, Tex.
- Terminal City Iron Works, Ltd.**, 1909 Franklin St., Vancouver, B.C.
- Tesco Chemicals, Inc.**, 1575 Northside Dr., N.W., Atlanta, Ga.
- Texas Water Wells, Inc.**, 951 McCarty St., Houston 15, Tex.
- Thomson Meter Co.**, 50 W. 50th St., New York 20, N.Y.
- Traverse City Iron Works**, Traverse City, Mich.
- Trinity Valley Iron & Steel Co.**, Box 664, Fort Worth, Tex.
- United Concrete Pipe Corp.**, Box 425, Baldwin Park, Calif.
- United Painting Co., Inc.**, 1961 Broadway, New York 23, N.Y.
- U.S. Pipe & Foundry Co.**, Burlington, N.J.
- U.S. Steel Co.**; see Consolidated Western Steel Corp.
- Universal Construction Co.**, 1129 Udell St., Indianapolis 23, Ind.
- Utility Clamp & Equipment Co.**, 1206 Maple Ave., Los Angeles 54, Calif.
- Valley Cities Supply Co.**, 853 E. Valley Blvd., San Gabriel, Calif.
- Varner Well Drilling Co.**, 2125 Oxford St., Rockford, Ill.
- Viking Supply Co., The**, 2625 Elm St., Dallas 1, Tex.
- Vogt Mfg. Co.**, Box 1122, Louisville 1, Ky.
- Wachs, E. H., Co.**, 1525 N. Dayton St., Chicago 22, Ill.
- Walker Process Equipment, Inc.**, 518 Hanks Ave., Aurora, Ill.
- Wallace & Tiernan Co., Inc.**, Box 178, Newark 1, N.J.
- Warren Foundry & Pipe Corp.**, 55 Liberty St., New York, N.Y.
- Water & Sewage Works, Gillette Publishing Co.**, 22 W. Maple, Chicago 10, Ill.
- Water Tank Service Co.**, 1030 M. & W. Tower Bldg., Dallas 1, Tex.
- Watertower Paint & Repair Co., Inc.**, Clear Lake, Iowa
- Water Works Engineering**, 24 W. 40th St., New York 18, N.Y.
- Water Works Supply Co.**, 681 Market St., San Francisco 5, Calif.
- Waterous Co.**, 80 E. Fillmore St., St. Paul 1, Minn.
- Well Machinery & Supply Co.**, 1629 Main St., Fort Worth, Tex.
- Welsbach Corp., The**, Ozone Processes Div., 1500 Walnut St., Philadelphia 2, Pa.
- West Virginia Pulp & Paper Co.**; see Industrial Chemical Sales Div.
- Western City Magazine**, 440 Statler Center Office Bldg., Los Angeles 17, Calif.
- Western Metal Products Co.**, 611 New York Life Bldg., Minneapolis, Minn.
- Western Water Works Supply Co.**, 2600 San Fernando Rd., Los Angeles 65, Calif.
- Westinghouse Electric Corp.**, 700 Braddock Ave., East Pittsburgh, Pa.
- Whitmore Tank Co., Inc.**, Box 6063, Jacksonville 5, Fla.
- Whittle Construction Co.**, Box 5602, Dallas, Tex.
- Wolverine Tube Div.**, Calumet & Hecla Consolidated Copper Co., 1850 Guardian Bldg., Detroit 26, Mich.
- Wood, R. D., Co.**, 1072 Public Ledger Bldg., Independence Square, Philadelphia 5, Pa.
- Worthington Corp.**, 401 Worthington Ave., Harrison, N.J.
- Worthington-Gannon Meter Div.**, 296 South St., Newark 5, N.J.

how to save... a quarter million dollars

A large mid-western city recently was faced with this problem. Within eight years after the water treatment plant was placed in operation, the submerged steel showed active corrosion of alarming proportions — the warning of a possible loss of a quarter million dollar investment. Various coatings were tested for possible application, but none of those tested was considered satisfactory.

It was then that the ERP man was called in. At approximately half the cost of sand blasting and coating, and with no surface preparation or long outage time, an ERP cathodic protection system was installed to protect all submerged steel in the treatment equipment. After three years *there has been no further corrosion, and an appreciable saving in maintenance has been realized!*

This is a typical example of ERP at work. Whether your corrosion problem involves a tank, basin, deep well, water works treatment structure, or pipe line it will be worth your while to discuss it with your ERP man. His expert advice may save you *dollars* tomorrow.



DESIGN
ENGINEERING
MAINTENANCE
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COMPLETE CATHODIC PROTECTION SERVICE

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BELLEVILLE 9, NEW JERSEY

Represented in Principal Cities in the United States



Over 15 years of cathodic protection
engineering, research and development

LIQUID CHLORINE PRODUCERS

in the United States, Canada, and Cuba

Information compiled by the Chlorine Institute and current June 1953

State	City	Producer	Containers Filled*
United States			
Ala.	Huntsville	Chemical Corps (leased to National Distillers Products Co.)	S
	Muscle Shoals	Chemical Corps (to be leased)	S
	McIntosh	Mathieson Alabama Corp.	S
Ark.	Pine Bluff	Chemical Corps (leased to Diamond Alkali Co.)	S
Calif.	Pittsburg	Western Div., The Dow Chemical Co.	C, T, S
Colo.	Denver	Chemical Corps (leased to Shell Chemical Corp.)	C, T, S
Ill.	Monsanto	Monsanto Chemical Co.	C, T, S
Kan.	Wichita	Frontier Chemical Co.	C, T, S
Ky.	Louisville	Goodrich Chemical Co.	C, T, S
La.	Baton Rouge	Ethyl Corporation	
	Baton Rouge	The Solvay Process Div., Allied-Chem. & Dye Corp.	C, T, S
	Lake Charles	Columbia-Southern Chem. Corp.	C, T, S
Md.	Edgewood	Chemical Corps (leased to Diamond Alkali Co.)	C, T, S
Mich.	Midland	The Dow Chemical Co.	
	Wyandotte	Penn. Salt Mfg. Co.	C, T, S
	Wyandotte	Wyandotte Chemical Corp.	S
Nev.	Las Vegas	Stauffer Chemical Co. of Nevada, Inc.	S
N.H.	Berlin	Brown Co.	C, T, S
N.J.	Deepwater Point	E. I. du Pont de Nemours & Co., Inc.	
N.Y.	Mechanicville	West Vir. Pulp & Paper Co.	S
	Niagara Falls	E. I. du Pont de Nemours & Co., Inc.	
	Niagara Falls	Hooker Electrochemical Co.	C, T, S
	Niagara Falls	Niagara Div., International Minerals & Chem. Corp.	S
	Niagara Falls	Mathieson Chemical Corp.	T, S
	Niagara Falls	Niagara Alkali Co.	C, T, S
	Niagara Falls	Stauffer Chemical Co.	S
Ohio	Syracuse	Solvay Process Div., Allied Chemical & Dye Corp.	C, T, S
	Ashtabula	National Distillers Products Co.	S
	Barberton	Columbia-Southern Chemical Co.	C, T, S
	Painesville	Diamond Alkali Co.	C, T, S
Ore.	Portland	Pennsylvania Salt Mfg. Co. of Wash.	C, T, S
R.I.	Providence	Fields Point Mfg. Corp.	C
Tenn.	Memphis	Velsicol Corp.	C, T, S
Tex.	Corpus Christi	Columbia-Southern Chemical Corp.	C, T, S
	Freeport-Velasco	The Dow Chemical Co.	S
	Houston	Diamond Alkali Co.	C, T, S
	Houston	Ethyl Corp.	S
Va.	Hopewell	Hercules Powder Co.	S
	Hopewell	The Solvay Process Div., Allied Chemical & Dye Corp.	C, T, S
	Saltville	Mathieson Chemical Corp.	S
Wash.	Tacoma	Hooker Electrochemical Co.	C, T, S
W.Va.	New Martinsville	Pennsylvania Salt Mfg. Co. of Washington	C, T, S
	South Charleston	Columbia-Southern Chemical Corp.	C, T, S
		Westvaco Chemical Div., Food Machinery & Chemical Corp.	T, S
Wis.	Kimberly	Kimberly-Clark Corp.	
Canada			
Ont.	Cornwall	Canadian Industries, Ltd.	S
	Sarnia	Dow Chemical of Canada, Ltd.	C, T, S
Que.	Windor	Canadian Industries, Ltd.	C, T, S
	Arvida	Aluminum Co. of Canada, Ltd.	S
	Beauharnois	Dominion Tar & Chemical Co., Ltd.	S
	Shawinigan Falls	Canadian Industries, Ltd.	S
Cuba			
Santa Clara	Sagua la Grance	Electro-Quimica de Sagua	C

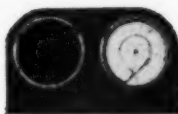
* C—Cylinders; T—Ton Containers; S—Single Unit Tank Cars.

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*Reliable
measuring and controlling
equipment*



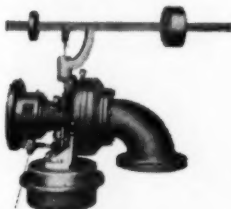
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TYPE H METER—Mercury-float type indicating, recording and totalizing unit. Gives $\pm 2\%$ accuracy at any point over flow ranges as wide as 13 to 1. Evenly spaced gradations make accurate readings easy. Available for wall, panel, or floor stand mounting.



FLOW CONTROLLERS

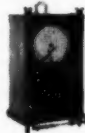
Maintain constant flow regardless of variations in head of filter effluent or wash water. Control within $\pm 3\%$ over 5 to 1 range. Exclusive, balanced guillotine valves quickly respond to slightest pressure differential. Standard sizes from 3" to 24".

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Prevent collapse of thin-walled pipes with sudden pressure drops in gravity lines. Simple, reliable float control quickly admits air to break vacuum. Available in 4" to 10" sizes.

AIR RELEASE VALVES

Vent air accumulations to eliminate air binding at high points and increase pumping efficiency. Simple, rugged 1" and 2" sizes for up to 250 p.s.i. Special valves available for up to 800 p.s.i.



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Leaks and line breaks are quickly located with Simplex pitot rods, manometers and recorders. Light-weight, compact design makes them truly portable. Invaluable for overall survey of distribution system's efficiency.

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Liquid Chlorine Repackagers

State	City	Repackager	Containers Filled*
Ala.	Birmingham	Wittichen Chemical Co.	C
Calif.	Duarte	Tops Chemical Co.	C, T
	Los Angeles	Western Div., Dow Chemical Co.	C, T
	Torrance	John Wiley Jones Co.	C, T
Colo.	Denver	Denver Fire Clay Co.	C
Fla.	Jacksonville	Jones Chemicals, Inc.	C, T
	Tampa	Tesco Chemicals, Inc.	C, T
Ga.	Atlanta	Tesco Chemicals, Inc.	C
	Savannah	Coastal Chemical Co.	C, T
Ill.	Chicago	Alexander Chemical Co.	C, T
Ind.	Beech Grove (Indianapolis)	John Wiley Jones Co.	C, T
Iowa	Burlington	McKesson & Robbins	C
Mo.	Kansas City	Thompson-Hayward Chemical Co.	C
N.J.	Maple Shade	Pioneer Chloramone Corp.	C
	Kearny	Marzahl Chemical Co.	C
	Newark	American Oil & Supply Co.	C
	Newark	E. M. Sergeant Pulp & Chemical Co.	C
N.Y.	Caledonia	John Wiley Jones Co.	C, T
N.C.	Charlotte	John Wiley Jones Co.	C, T
	Thomasville	Tesco Chemicals, Inc.	C, T
Pa.	Altoona	Western Pennsylvania Chem. Co.	C, T
	Lebanon	Lebanon Chemical Co.	C, T
	Philadelphia	Pennsylvania Salt Mfg. Co.	C, T
	Philadelphia	Pioneer Chemical Works, Inc.	C, T
S.C.	Spartanburg	Moreland Chemical Co.	C
Va.	Rosslyn	Peebles Chemical Co.	C
W.Va.	Belle	Belle Alkali Co.	C
Wis.	Milwaukee	Hydrite Chemical Co.	C, T

* C—Cylinders; T—Ton Containers.

Producers of Dry Hypochlorites

State	City	Producer
Mich.	Wyandotte	Pennsylvania Salt Mfg. Co.
N.Y.	Niagara Falls	Mathieson Chemical Corp.
Ohio	Barberton	Columbia-Southern Chemical Corp.

Manufacturers of Equipment for Feeding Chlorine and Hypochlorites

State	City	Manufacturer	Type of Equipment*
Calif.	Los Angeles	Paddock Pool Equipment Co.	Cl
Ill.	Chicago	Everson Mfg. Co.	Cl
Md.	Baltimore	Mathieson Chemical Corp.	H
Mass.	Somerville	Preclasion Machine Co.	H
N.J.	Newark	Wallace & Tiernan Co.	Cl, H
N.Y.	Buffalo	Manzel Brothers Co.	H
	Buffalo	Wilson Co.	H
	Leroy	Lapp Insulator Co.	H
	New York	Morse Boulger Destructor Co.	H
Pa.	Hatboro	Fischer & Porter Co.	Cl
	Philadelphia	Milton Roy Co.	H
	Philadelphia	Orchem Pump Co.	H
R.I.	Providence	Builders-Providence, Inc.	Cl
	Providence	Proportioners, Inc.	H
Tex.	Dallas	Chlor-O-Matic Mfg. Co.	H

* Letters denote material fed: Cl—Chlorine; H—Hypochlorite.

pedigree is no accident...

Just as a show-dog's winning pedigree is no accident, neither is the pedigree of a Wallace & Tiernan Chlorinator. Both are distinctive and reflect the result of years of selection, training and experience.

Selection, in the sense of progressive, laboratory-tested improvements in design and construction . . . Improvements which increase the value of dependability "inbred" in W&T Equipment for forty years.

Training, in the sense of a nation-wide staff of Chlorination Specialists, equipped to give prompt service and installation advice on all W&T Equipment.

Experience, in the sense of the many thousands of W&T Chlorinator installations, now meeting the particular daily chlorination requirements of communities all over the world.

The pedigree of a W&T Chlorinator is an open book. Why not write for a free introductory chapter today?

S-83

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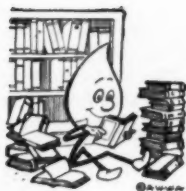
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Books may be obtained from the publisher or through local booksellers. The AWWA does not undertake to accept orders for any books but those published by it. For the purchaser's information, the complete address of every publisher represented in the list is given on page 124. The prices given were current at the time the list was compiled, but are subject to subsequent change. Some of the professional organizations offer discounts on the list prices of books they publish to their own members; only list prices are given below. A separate and complete list of AWWA publications appears on page 57.

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"American Journal of Public Health" and "The Nation's Health"—Index 1911-1945. Garrard Press (1947) \$7

Annotated Bibliography on Hydrology, 1941-1950 (United States and Canada). American Geophysical Union (1952) \$1.75 [distributed by Government Printing Office]

Bibliographic Survey of Corrosion. National Assn. of Corrosion Engineers (1945, \$5; 1946-47, \$7; 1945 and 1946-47 combined, \$12)

Bibliography and Index of Publications Relating to Ground Water Prepared by the Geological Survey and Cooperating Agencies. Gerald A. Waring & Oscar Meinzer, ed. Geological Survey (1947) \$1 [distributed by Government Printing Office]

Bibliography on Water and Sewage Analysis. B. H. Weil et al., ed. Special Report 28, State Engineering Station, Georgia Inst. of Technology (1948) \$4

Concise Chemical and Technical Dictionary. H. Bennett. Chemical Pub. Co. (1947) \$10

Glossary—Water and Sewage Control Engineering. American Society of Civil Engineers (1949) \$2

Index to "Engineering News-Record" for the Years 1928 to 1943 Inclusive. McGraw-Hill Pub. Co. (1947) \$8

Index to the "Proceedings," "Journal" and Other Publications of the American Water Works Association. American Water Works Assn. (1881-1939 Index, \$2; 1940-1944 Supplement, \$1)

Index to "Sewage Works Journal," 1928-1948. Federation of Sewage & Industrial Wastes Associations (1950) \$4.50.

Publications of the Geological Survey. Geological Survey (1948) free

Source Materials on Water Pollution Control. Pub. 243, Div. of Water Pollution Control, Public Health Service (1952) free

Sources of Engineering Information. Univ. of California Press (1948) \$4

Specification Index of Construction Items and Materials. Allen V. Rothermel (1953) \$5

Selected Bibliography of Engineering Subjects. Engineers' Council for Professional Development. Section III—Civil Engineering (1950) 25¢

Popular and Historical

BAKER, M. N. *The Quest for Pure Water.* American Water Works Assn. (1948) \$5

DRAFFIN, JASPER OWEN. *The Story of Man's Quest for Water.* The Garrard Press (1939) \$2.25

FOX, CYRIL S. *Water.* Philosophical Library (1952) \$8.75

FRONTINUS, SEXTUS JULIUS. *The Aqueducts of Rome.* Charles E. Bennett and

(Continued on page 114)

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Mary B. McElwain revision of Clemens Herschel translation; also Latin original (c. 97 A.D.). Includes text of *The Strategems*. Loeb Classical Library, Harvard Univ. Press (English ed. 1925) \$3

KING, THOMSON. *Water—Miracle of Nature*. Macmillan Co. (1953) \$3.50

WILLIAMS, ALBERT N. *The Water and the Power: Development of the five great rivers of the West*. Duell, Sloan & Pearce (1951) \$4.50

WATER RESOURCES

Conservation and Water Policy

CARHART, ARTHUR H. *Water—or Your Life*. J. B. Lippincott Co. (1951) \$4

Conservation of Natural Resources. Guy-Harold Smith, ed. John Wiley & Sons (1950) \$6

FRANK, BERNARD & NETBOY, ANTHONY. *Water, Land and People*. Alfred A. Knopf (1950) \$4.50

MACKICHAN, KENNETH A. *Estimated Use of Water in the United States—1950*. Circular 115, Geological Survey (1951) free
Proceedings of the UN Scientific Conference on the Conservation and Utilization of Resources. United Nations, New York [distributed by International Documents Service, Columbia Univ. Press.] Vol. I—*Pleinary Meetings* (1950) \$4.50; Vol. IV—*Water Resources* (1952) \$4.50

SAUNDERSON, MONT H. *Western Land and Water Use*. Univ. of Oklahoma Press (1950) \$3.75

Water and Man: A study in ecology. Friends of the Land (1950) \$5

Water in Industry. Conservation Foundation & National Assn. of Manufacturers (1950) free

A Water Policy for the American People. President's Water Resources Policy Commission (1950) Vol. 1—*General Report*, \$3.25; Vol. 2—*Ten Rivers in America's Future*, \$6; Vol. 3—*Water Resources Law*, \$2.25; *Summary of Recommendations*, 15¢ [distributed by Government Printing Office]

Hydrology and Surface Waters

BARROWS, H. K. *Floods—Their Hydrology and Control*. McGraw-Hill Book Co. (1948) \$7

FOSTER, EDGAR E. *Rainfall and Runoff*. Macmillan Co. (1948) \$9

GROVER, NATHAN C. & HARRINGTON, ARTHUR W. *Stream Flow*. John Wiley & Sons (1943) \$6

HARBECK, G. E. *Reservoirs in the United States*. Circular 23, Geological Survey (1948; revision in preparation) free

JOHNSTONE, DON & CROSS, WILLIAM P. *Elements of Applied Hydrology*. The Ronald Press Co. (1949) \$5

LINSLEY, RAY K., JR.; KOHLER, MAX A.; & PAULHUS, JOSEPH L. H. *Applied Hydrology*. McGraw-Hill Book Co. (1949) \$9

MEINZER, OSCAR E. *Hydrology*. Dover Publications (1942; reprinted 1949) \$4.95

MEAD, DANIEL W. *Hydrology: The Fundamental Basis of Hydraulic Engineering*. McGraw-Hill Book Co. (2nd ed., 1950) \$8

PICKELS, GEORGE W. *Drainage and Flood Control Engineering*. McGraw-Hill Book Co. (2nd ed., 1941) \$6.50

WISLER, CHESTER O. & BRATER, E. F. *Hydrology*. John Wiley & Sons (1949) \$6.50

Water Resources (of various regions). Geological Survey [published under individual regional titles*] usually free

Regional Water Resources

LOHR, E. W., ET AL. *The Industrial Utility of Public Water Supplies in the United States, 1952*. Geological Survey [States are treated by groups in the following circulars: 197—East South-Central; 203—Mountain; 206—West North-Central; 221—West South-Central; 232—Pacific; 253—East North-Central; 269—South Atlantic; 283—Middle Atlantic; 288—New England] (1952-53) free

Quality of Surface Waters of the United States. Geological Survey [Continuing reports of chemical analyses at sampling points, issued as regional Water-Supply Papers*] variously priced [distributed by Government Printing Office]

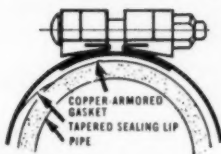
Surface Water Supply of the United States. Geological Survey [Annual reports on water flow and level at gaging stations, issued as 14 regional Water-Supply Papers*] variously priced [distributed by Government Printing Office]

* Details given in *Publications of the Geological Survey* noted on p. 114 above. Additional studies have been published by certain state agencies, also.

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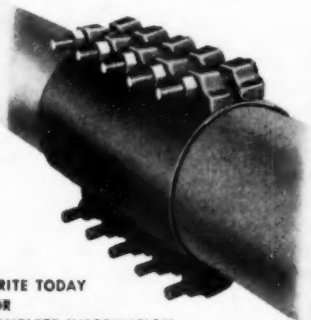


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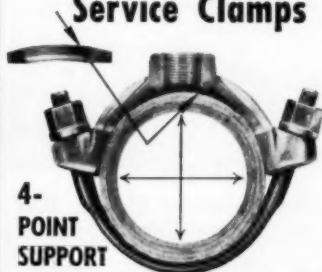
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- ANDERSON, KEITH. *Water Well Handbook*. Missouri Well Drillers Assn. (2nd ed., 1948) \$2
- BENNISON, E. W. *Ground Water: Its Development, Uses and Conservation*. Edward E. Johnson (1947) \$2.25
- MCGUINNESS, C. L. *The Water Situation in the United States With Special Reference to Ground Water*. Circular 114, Geological Survey (1951) free
- MCGUINNESS, C. L. *Water Law With Special Reference to Ground Water*. Geological Survey (1951) free
- MEINZER, O. E. *The Occurrence of Ground Water in the United States, With a Dis-*

cussion of Principles. Water Supply Paper 489, U.S. Geological Survey (1923; reprinted 1948) \$2.25 [distributed by Government Printing Office]

TOLMAN, C. F. *Ground Water*. McGraw-Hill Book Co. (1937) \$8.50

THOMAS, HAROLD E. *The Conservation of Ground Water*. McGraw-Hill Book Co. (1951) \$6.50

Water Levels and Artesian Pressures in Observation Wells in the United States. Geological Survey (annual reports issued as regional Water-Supply Papers*) variously priced [distributed by Government Printing Office]

WATER QUALITY**Aquatic Life**

- TIFFANY, LEWIS HANFORD & BRITTON, MAX EDWIN. *The Algae of Illinois*. Univ. of Chicago Press (1952) \$10
- WELCH, PAUL S. *Limnological Methods*. Blakiston Co. (1948) \$7

Bacterial and Chemical Analysis

- Bergey's Manual of Determinative Bacteriology*. Robert S. Breed et al. Williams & Wilkins Co. (6th ed., 1948) \$15
- BLEW, M. J. & HARDENBERGH, WILLIAM A. *Chemistry, Bacteriology, Insect Control*. International Textbook Co. (1941) \$2.20
- COX, CHARLES R. *Laboratory Control of Water Purification*. Case-Shepherd-Mann Pub. Corp. (1946) \$4
- GAINES, P. L. & LORD, THOMAS H. *Microbiology of Water and Sewage*. Prentice-Hall (1952) \$7.85
- Manual on Industrial Water*. American Society for Testing Materials (1953) \$4.25
- PRESCOTT, SAMUEL CATE; WINSLOW, CHARLES-EDWARD AMORY; & MCCRADY, MAC HARVEY. *Water Bacteriology*. John Wiley & Sons (6th ed., 1946) \$5.25
- Standard Methods for the Examination of Water and Sewage*. American Public Health Assn. and American Water Works Assn. (9th ed., 1946) \$4 [distributed by American Public Health Assn.]
- STREETER, H. W. *Laboratory Control of Water Supplies*. "Public Health Reports" Supplement No. 201 (1947) 10¢ [distributed by Government Printing Office]

TAYLOR, EDWIN WINDLE. *The Examination of Waters and Water Supplies*. [Published in Great Britain; distributed in U.S. by Blakiston Co.] (6th ed., 1949) \$12

THEROUX, FRANK R.; ELDRIDGE, EDWARD F.; & MALLMAN, W. LEROY. *Laboratory Manual for Chemical and Bacterial Analysis of Water and Sewage*. McGraw-Hill Book Co. (3rd ed., 1943) \$4.00

Zinsser's Textbook of Bacteriology. David T. Smith & Norman F. Conant, ed. Appleton-Century-Crofts (10th ed., 1952) \$11

Public Health

BABBITT, HAROLD E. *Engineering in Public Health*. McGraw-Hill Book Co. (1952) \$8

Better Health for 5 to 14 Cents a Year Through Fluoridated Water. PHS Pub. 62, Div. of Dental Public Health, Public Health Service (1951) 15¢ [distributed by Government Printing Office]

EHLERS, VICTOR M. & STEEL, ERNEST W. *Municipal and Rural Sanitation*. McGraw-Hill Book Co. (4th ed., 1950) \$6.75

Fluoridation Facts. American Dental Assn. (revised 1953) free

Fluoridation Information Materials Kit. American Dental Assn. (revised periodically) \$1

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- Fluoridation in the Prevention of Dental Caries.* American Dental Assn. (revised 1953) free
- FRAZER, W. M. *Textbook of Public Health.* E. & S. Livingstone, Ltd., Edinburgh (13th ed., 1953) \$8.50 [distributed in U.S. by Williams & Wilkins Co.]
- HOPKINS, EDWARD S. & ELDER, FRANCIS B. *The Practice of Sanitation.* Williams & Wilkins Co. (1951) \$7.50
- Nation-wide Inventory of Sanitation Needs.* "Public Health Reports," Supplement 204 (April 1948) 15¢ [distributed by Government Printing Office]
- PHELPS, EARLE B. *Public Health Engineering, Vol. 1.* John Wiley & Sons (1948) \$7.50
- A Survey of the Literature of Dental Caries.* Guttorm Toverud et al. Pub. 225, National Academy of Sciences-National Research Council (1952) \$3
- Pollution and Sewage Treatment**
- BABBITT, HAROLD E. *Sewerage and Sewage Treatment.* John Wiley & Sons (7th ed., 1953) \$5
- BESSELIEVRE, EDMUND B. *Industrial Waste Treatment.* McGraw-Hill Book Co. (1952) \$7.50
- HARDENBERGH, WILLIAM A. *Sewerage and Sewage Treatment.* International Textbook Co. (3rd ed., 1950) \$6.50
- Let's Have Clean Water:* Pollution control information kit. Pub. 264, Public Health Service (1952) free
- Manual for Sewage Plant Operators.* Texas Water Works & Sewerage Short School (1946) \$4
- Manuals of Sewage Works Practice.* Federation of Sewage Works Associations. No. 1—Occupational Hazards in the Operation of Sewage Works (1944) 50¢; No. 2—Utilization of Sewage Sludge as Fertilizer (1946) \$1.25; No. 3—Municipal Sewer Ordinances (1949) \$1; No. 4—Chlorination of Sewage and Industrial Wastes (1951) \$1.25; No. 5—Air Diffusion in Sewage Works (1952) \$1.25
- PHELPS, EARLE B. *Stream Sanitation.* John Wiley & Sons (1944) \$4.50
- Water Pollution in the United States.* Water Pollution Series, No. 1-16. Public Health Service (1951-52) free [No. 1 is the general report; 2-16 deal with the following drainage basins: 2. Tennessee River; 3. Missouri River; 4. Great Basin; 5. California; 6. Pacific Northwest; 7. Northeast; 8. Western Gulf; 9. Colorado River; 10. North Atlantic; 11. Lake Erie; 12. Ohio River; 13. Southeast; 14. Western Great Lakes; 15. Upper Mississippi; 16. Southwest-Lower Mississippi]
- Water Quality Criteria.* Pub. 3, California State Water Pollution Control Board (1952) \$3

WATER WORKS PRACTICE

Treatment

- Chlorine Manual.* The Chlorine Inst. (1947) free
- Deminalization of Saline Waters.* Office of Saline Water Research Coordination, Dept. of Interior (1952) free
- Drinking Water Standards.* "Public Health Reports" Reprint No. 2697 (Mar. 15, 1946) 5¢ [distributed by Government Printing Office]
- GOLDMAN, LOUIS *Boiler-Water-Treatment Manual for Federal-Plant Operators.* Handbook 5, Bureau of Mines (1951) 40¢ [distributed by Government Printing Office]
- HALE, FRANK E. *The Use of Copper Sulfate in Control of Microscopic Organisms.* Phelps Dodge Refining Corp. (5th ed., 1950) free
- HARDENBERGH, WILLIAM A. *Water Supply and Purification.* International Textbook Co. (3rd ed., 1952) \$6.50
- HOOVER, CHARLES P. *Water Supply and Treatment.* National Lime Assn. (1952) \$1.25
- HOPKINS, EDWARD S. *Water Purification Control.* Williams & Wilkins Co. (3rd ed., 1948) \$4
- Manual of Recommended Water-Sanitation Practice.* Public Health Bulletin 296, Public Health Service (1946) 15¢ [distributed by Government Printing Office]
- NORDELL, ESKELL. *Water Treatment for Industrial and Other Uses.* Reinhold Pub. Corp. (1951) \$10
- RUDOLFS, WILLEM. *Lime: Handling, Storage and Application.* National Lime Assn. (1949) single copies free

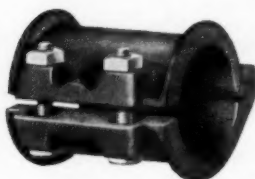
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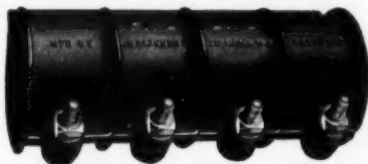
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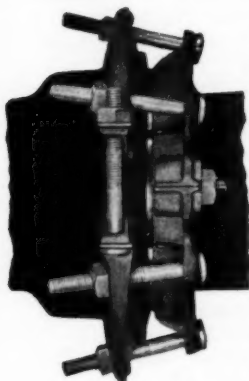


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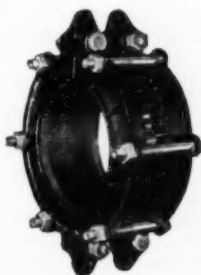
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RYAN, WILLIAM J. *Water Treatment and Purification*. McGraw-Hill Book Co. (2nd ed., 1946) \$5.50

Water Quality and Treatment: A manual. American Water Works Assn. (1950) \$5

Water Works Operation

BABBITT, HAROLD E. & DOLAND, JAMES J. *Water Supply Engineering*. McGraw-Hill Book Co. (4th ed., 1949) \$7.50

BRUSH, W. W. *Water Works Questions and Answers*. Reprinted from *Water Works Engineering*. Case-Shepherd-Mann Pub. Corp. (1952) 75¢

HENDERSON, ANGUS D. *Test Methods for the Water Works Superintendent*. Reprinted from *Water Works Engineering*. Case-Shepherd-Mann Pub. Corp. (1951) 75¢

HIRSCH, A. A. *Manual for Water Plant Operators*. Chemical Pub. Co. (1945) \$6.50

Manual of British Water Supply Practice. Aubrey Thomas Hobbs, ed. Inst. of Water Engineers, London (1950) \$7.50 [distributed in United States by American Water Works Assn.]

Manual for Water Works Operators. Texas Water Works & Sewerage Short School (3rd ed., 1951) \$5

STEEL, ERNEST W. *Water Supply and Sewerage*. McGraw-Hill Book Co. (3rd ed., 1953) \$8

TURNHAURE, F. E. & RUSSELL, H. L. *Public Water Supplies*. John Wiley & Sons (4th ed., 1940) \$7

A Valve Manual for Water Works and Sewage Works Operators. Vance Lischer, ed. Missouri Water & Sewerage Conference (1949) \$2.50

Engineering Reference

ASTM Index to Standards. American Society for Testing Materials (1952) free

ASTM Standards. American Society for Testing Materials (1952) In 7 parts: 1—Ferrous Metals, \$12; 2—Non-Ferrous Metals, \$10; 3—Cement, Concrete, Ceramics, Thermal Insulation, Road Materials, Waterproofing, and Soils, \$12; 4—Paint, Naval Stores, Wood, Fire Tests, Sandwich Constructions, Building Construction, \$10; 5—Fuels, Petroleum, Aromatic Hydrocarbons, and Engine Antifreezes, \$10; 6—Electrical Insulation, Plastics, and Rubber, \$12; 7—Textiles, Soap, Water, Paper, Adhesives, and Shipping Containers, \$10

Chemical Engineers' Handbook. John H. Perry, ed. McGraw-Hill Book Co. (3rd ed., 1950) \$17

Civil Engineering Handbook. Leonard Church Urquhart, ed. McGraw-Hill Book Co. (3rd ed., 1950) \$11

Data Book for Civil Engineers. Elwyn E. Seelye, ed. John Wiley & Sons. Vol. I—Design (2nd ed., 1951); Vol. II—Specifications and Costs (2nd ed., 1951) \$13; Vol. III—Field Practice (1947) \$5

Fire Engine Tests and Fire Stream Tables. National Board of Fire Underwriters (5th ed., 1950) free to officers and pump operators

Handbook of Chemistry. Norbert Adolph Lange & Gordon M. Forker, ed. Handbook Publishers (8th ed., 1952) \$7

Handbook of Chemistry and Physics. Chemical Rubber Pub. Co. (34th ed., 1950) \$8.50

Handbook of Engineering Fundamentals. Ovid W. Eschbach, ed. John Wiley & Sons (2nd ed., 1952) \$10

Hydroelectric Handbook. William P. Creager & Joel D. Justin, ed. John Wiley & Sons (2nd ed., 1950) \$15

Kent's Mechanical Engineers' Handbook. John Wiley & Sons (12th ed., 1950) *Power* \$8.50; *Design and Shop Practice* \$8.50

Metals Handbook. American Society for Metals (1948 ed.) \$15

National Fire Codes. National Fire Protection Assn. Vol. I—Flammable Liquids, Gases, Chemicals and Explosives (1951, \$4). Vol. II—Prevention of Dust Explosions (1952, \$3). Vol. III—Building Construction and Equipment (1951, \$4). Vol. IV—Extinguishing and Alarm Equipment (1951, \$4). Vol. V—The National Electrical Code (1951, \$3).

NFPA Handbook of Fire Protection (Crosby-Fiske-Forster). National Fire Protection Assn. (10th ed., 1948) \$9.50

NFPA Inspection Manual. National Fire Protection Assn. (1950) \$3

Survival and Retirement Experience With Water Works Facilities. American Water Works Assn. (1947) \$3

Hydraulics

ADDISON, HERBERT. *A Treatise on Applied Hydraulics*. John Wiley & Sons (3rd ed., 1945) \$7.50

—. *Hydraulic Measurements*. John Wiley & Sons (2nd ed., revised 1947) \$6

Engineering Hydraulics. Hunter Rouse, ed. John Wiley & Sons (1950) \$15

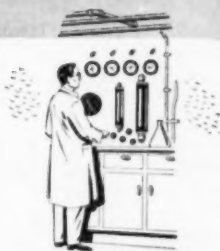
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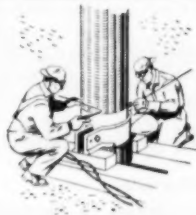
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Handbook of Applied Hydraulics. Calvin V. Davis, ed. McGraw-Hill Book Co. (2nd ed., 1952) \$15

KING, HORACE W. *Manning Formula Tables.* McGraw-Hill Book Co. Vol. I—*Flow in Pipes* (1937) \$8.50; Vol. II—*Flow in Open Channels* (1939) \$8

McCLAIN, CLIFFORD. *Fluid Flow in Pipes.* Industrial Press (1952) \$3

ROUSE, HUNTER. *Elementary Mechanics of Fluids.* John Wiley & Sons (1946) \$5

Standards of Hydraulic Institute. Hydraulic Inst. (10th ed. in press)

WILLIAMS, GARDNER S. & HAZEN, ALLEN. *Hydraulic Tables.* John Wiley & Sons (3rd ed., revised 1933) \$3.25

WOODWARD, SHERMAN M. & POSEY, CHESLEY J. *The Hydraulics of Steady Flow in Open Channels.* John Wiley & Sons (1941) \$4.25

Piping

ASTM Specifications for Steel Piping Materials. American Society for Testing Materials (1952) \$3.75

American Standard Code for Pressure Piping—ASA B31.1-1951. American Society of Mechanical Engineers (1951) \$3.50

Handbook of Cast Iron Pipe. Cast Iron Pipe Research Assn. (2nd ed., 1952) \$5

Piping Handbook. Sabin Crocker, ed. McGraw-Hill Book Co. (1945) \$10

Corrosion

Cathodic Protection: Report of Correlating Committee on Cathodic Protection. National Assn. of Corrosion Engineers (1951) 50¢

Corrosion Handbook. Herbert H. Uhlig, ed. John Wiley & Sons (1948) \$13.50

LOGAN, KIRK H. *Underground Corrosion.* National Bureau of Standards (1945) \$3 [distributed as Catalog No. C13.4:450 from Government Printing Office]

SPELLER, FRANK N. *Corrosion: Causes and Prevention.* McGraw-Hill Book Co. (3rd ed., 1951) \$11

Construction and Foundations

BAVER, L. D. *Soil Physics.* John Wiley & Sons (2nd ed., 1948) \$4.75

CREAGER, WILLIAM P.; JUSTIN, JOEL D.; & HINDS, JULIAN. *Engineering for Dams.* John Wiley & Sons. Vol. I—*General Design* (1945) \$6; Vol. II—*Concrete Dams* (1945) \$7.50; Vol. III—*Earth, Rock-Fill, Steel and Timber Dams* (1945) \$7.50; all three, \$19

JACOBY, HENRY S. & DAVIS, ROLAND P. *Foundations of Bridges and Buildings.* McGraw-Hill Book Co. (1941) \$6.75

KRYNINE, D. P. *Soil Mechanics.* McGraw-Hill Book Co. (2nd ed., 1947) \$7

PECK, RALPH B.; HANSON, WALTER E.; & THORNBURN, THOMAS H. *Foundation Engineering.* John Wiley & Sons (1953) \$6.75

Subcommittee on Small Water Storage Projects of the Water Resources Committee. *Low Dams—Manual of Design for Small Water Storage Projects.* National Resources Planning Board, Washington, D.C. (1938) \$2.50 [distributed as Catalog No. Y3.N21/12:2D18 from Government Printing Office]

SUTHERLAND, HALE & REESE, RAYMOND C. *Introduction to Reinforced Concrete Design.* John Wiley & Sons (2nd ed., 1943) \$6

TAYLOR, DONALD W. *Fundamentals of Soil Mechanics.* John Wiley & Sons (1948) \$6.50

TERZAGHI, KARL & PECK, RALPH B. *Soil Mechanics in Engineering Practice.* John Wiley & Sons (1948) \$6.50

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ABBETT, ROBERT W. *Engineering Contracts and Specifications.* John Wiley & Sons (2nd ed., 1948) \$4.50

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- CHATTERS, CARL H. & HILLHOUSE, ALBERT M. *Local Government Debt Administration*. Prentice-Hall (1939) \$6.65
- CHATTERS, CARL H. & TENNER, IRVING. *Municipal and Governmental Accounting*. Prentice-Hall (2nd ed., 1947) \$8
- Fundamental Considerations in Rates and Rate Structures for Water and Sewage Works*. Joint Committee Report, reprinted from Ohio State Law Journal by American Society of Civil Engineers (1951) 75¢
- Government Timekeeping and Payroll Procedure*. Procedural Bulletin, Municipal Finance Officers Assn. (1940) 50¢
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- Manual of Water Works Accounting*. Municipal Finance Officers Assn. and American Water Works Assn. (1938) \$4
- The Municipal Index*. American City Magazine Corp. (issued annually, 1953) \$5
- The Municipal Year Book—1953*. Clarence E. Ridley, Orin F. Nolting, & David S. Arnold, ed. International City Managers Assn. (1953; revised annually) \$10
- Retirement Plans for Public Employees*. Municipal Finance Officers Assn. (1946) \$1
- RHYNE, CHARLES S. *The Law of Municipal Contracts, With Annotated Model Forms*. National Inst. of Municipal Law Officers (1952) \$7.50
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- Simplified Municipal Accounting*. Municipal Finance Officers Assn. (1946) \$3.25
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- Survival Under Atomic Attack*. Document 130, National Security Resources Board (1950) 10¢ [distributed by Government Printing Office]
- TENNER, IRVING. *Financial Administration of Municipal Utilities*. No. Sp40, Public Administration Service (1947) \$3.75
- Uniform System of Accounts for Water Utilities*. National Assn. of Railroad and Utilities Commissioners (1939) \$4 from State Law Reporting Co.
- United States Civil Defense*. Document 128, National Security Resources Board (1950) 40¢ [distributed by Government Printing Office]

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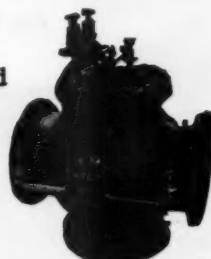
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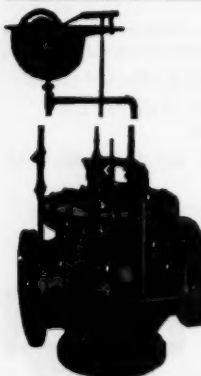
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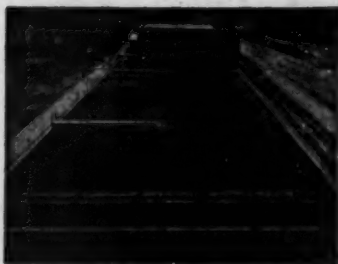
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